AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE	OF PAGES
	1	2

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
Am-0003	6/9/03		

6. ISSUED BY CODE

U.S. Army Engineer District, Honolulu
Corps of Engineers, Building 230
ATTN: CEPOH-CT-C (Jennifer Ko)
Fort Shafter, Hawaii 96858-5440

7. ADMINISTERED BY *(If other than Item 6)* CODE

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and ZIP Code)*

CODE FACILITY CODE

(√) X

9A. AMENDMENT OF SOLICITATION NO.
DACW83-03-R-0004

9B. DATED *(SEE ITEM 11)*
5/6/03

10A. MODIFICATION OF CONTRACTS/ORDER NO.

10B. DATED *(SEE ITEM 13)*

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(√)
- A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
- B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation date, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
- C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
- D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return _____copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Solicitation No. DACW83-03-R-0004, Tern Island Shore Protection Projects, Tern Island, French Frigate Shoals, Hawaii

(Continued on Page 2)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	
15B. CONTRACTOR/OFFEROR *(Signature of person authorized to sign)*	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY *(Signature of Contracting Officer)*	16C. DATE SIGNED

1. CHANGES TO SPECIFICATIONS. Attached hereto are new and revised pages to the solicitation. The revision mark (Am-0003) is shown on each new and revised page.

a. REVISED SECTIONS/PAGES/CLAUSES/PARAGRAPH. Following are revised pages to the solicitation. Changes are indicated in **bold** print.

Section 00010, SF 1442, Solicitation, Offer, and Award (Front)

b. DELETED CLAUSES/PAGES. The following items are deleted from the solicitation.

Improvements to Tern Island:
Project Table of Contents page 1
Submittal Register (15 pages)

c. NEW CLAUSES/PAGES. The following are new pages to the solicitation.

Section 00900, Miscellaneous Attachments:
Contractor's Questions and Answers (5 pages)

Improvements to Tern Island Project:
Project Table of Contents page 1
Submittal Register (17 pages)
Section 13286N pages 1 - 7
Section 13280A pages 1 - 40
Section 13280A Attachment (7 sheets)

2. The proposal due date of June 12, 2003,is EXTENDED to June 19, 2003, 2:00 P.M., Hawaiian Standard Time.

SOLICITATION, OFFER, AND AWARD *(Construction, Alteration, or Repair)*	1. SOLICITATION NUMBER	2. TYPE OF SOLICITATION	3. DATE ISSUED	PAGE OF PAGES
	DACW83-03-R-0004	☐ SEALED BID *(IFB)* ☒ NEGOTIATED *(RFP)*	6 May 03	1

IMPORTANT - The "offer" section on the reverse must be fully completed by the offeror.

4. CONTRACT NUMBER	5. REQUISITION/PURCHASE REQUEST NUMBER	6. PROJECT NUMBER

7. ISSUED BY CODE	8. ADDRESS OFFER TO
U.S. Army Engineer District, Honolulu ATTN: CEPOH-CT-C Building 230 Fort Shafter, Hawaii 96858-5440	U.S. Army Engineer District, Honolulu ATTN: CEPOH-CT-C Building 230 Fort Shafter, Hawaii 96858-5440 (Deliver hand-carried proposals to Building 200, Fort Shafter, Hawaii)

9. FOR INFORMATION CALL ▶	A. NAME	B. TELEPHONE NUMBER *(Include area code) (NO COLLECT CALLS)*
	JENNIFER KO	(808) 438-8584

SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS *(Title, identifying number, date):*

Tern Island Shore Protection Projects, Tern Island, French Frigate Shoals, Hawaii

(See Main Table of Contents)

*See Section 00700, Clause 52.211-10

11. The Contractor shall begin performance within 7 calendar days and complete it within * calendar days after receiving

☐ award, ☒ notice to proceed. This performance period is ☒ mandatory, ☐ negotiable. *(See* Section 00700, 52.211-10 .

12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE PAYMENT BONDS? *(If "YES," indicate within how many calendar days after award in Item 12B.)*	12B. CALENDAR DAYS
☒ YES ☐ NO	14

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 2 copies to perform the work required are due at the place specified in Item 8 by 2:00pmHST *(hour,* local time 6/19/03 *(date).* If this is a sealed bid solicitation, offers will be publicly opened at that time. Sealed envelope containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee ☒ is, ☐ is not required.

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.

D. Offers providing less than 60 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

OFFER *(Must be fully completed by offeror)*

14. NAME AND ADDRESS OF OFFEROR *(Include ZIP Code)*	15. TELEPHONE NUMBER *(Include area code)*
	16. REMITTANCE ADDRESS *(Include only if different than Item 14)*
CODE FACILITY CODE	

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within _____ calendar days after the date offers are due. *(Insert any number equal or greater than the minimum requirement stated in 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)*

AMOUNTS ▶ (See Section 00010, Proposal Schedule)

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGEMENT OF AMENDMENTS
(The offeror acknowledges receipt of amendments to the solicitation - give number and date of each)

AMENDMENT NO.										
DATE										

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER *(Type or print)*	20B. SIGNATURE	20C. OFFER DATE

AWARD *(To be completed by Government)*

21. ITEMS ACCEPTED

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA

24. SUBMIT INVOICES TO ADDRESS SHOWN IN ▶ *(4 copies unless otherwise specified)*	ITEM	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO ☐ 10 U.S.C. 2304(c) ( ) ☐ 41 U.S.C. 253(c) ( )
26. ADMINISTERED BY CODE		27. PAYMENT WILL BE MADE BY

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

☐ 28. NEGOTIATED AGREEMENT *(Contractor is required to sign this document and return _____ copies to the issuing office.)* Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.	☐ 29. AWARD. *(Contractor is not required to sign this document.)* Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.

30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN *(Type or print)*		31A. NAME OF CONTRACTING OFFICER *(Type or print)*	
30B. SIGNATURE	30C. DATE	31B. UNITED STATES OF AMERICA BY	31C. AWARD DATE

SECTION 00900
MISCELLANEOUS ATTACHMENT
(Contractor Questions and Answers)

Q1. The above paragraph on page 5 of the WQC states that the Contractor is to comply with applicable specifications….contained in the revised WQC Application, dated July 31, 2001. Is this document available for review? If so, could a copy be distributed to all Bidders?

RESPONSE: Not available.

Q2. Paragraph 9 talks about the dredging activity, which will be required to remove the sand that will be replaced by the rip rap revetment. Based upon the following facts that:1. The island is exposed to high winds, large waves, and strong currents, and; 2. There exists strong tidal action along the existing sheet piles; it is likely the natural turbidity caused by these elements will make it difficult for the contractor to maintain the water quality standards the State desires. Will the State, therefore, shut the project down under high wave and strong current activities?

RESPONSE: See Tern Island Improvement Project, Phase II Shore Protection- Section 01430, Paragraph 3.1.4.2.

Q3. The SUP requires that the pile driving operations be off limits during April 1 through August 31. Can all other construction activities take place during this time period (i.e., sand and coral excavation, rip rap rock setting, concrete construction, PCB removal)? Will our work be stopped and work terminated that day if a monk seal encroaches within the limits of our construction activity? If so, how will the General Contractor be compensated for these times?

RESPONSE: Yes, other construction activities can take place during the April 1 through August 31 time period. It is expected that delays due to biological activities would be minimal as the animal transits the area but if these delays become a problem, a contract modification may be required.

Q4. Regarding the mooring bollards; Detail A;S-3/S-5 shows a minimum height of 2'-0". However, Detail J;S-5/S-6 shows a bollard height of 20"? Which is correct? Please clarify.

RESPONSE: Detail J/5-6 is correct. The bollard should be a minimum of 20” high.

Q5. The contractor will be required to set up construction barricades and marine silt curtains both landside and water side of the construction area. Both the barricades and the silt curtains will limit and hinder access to and from the beach and the ocean for monk seals, turtles and other marine species. Will these construction safety necessities used for the project be a violation of the Endangered Species Act? Please respond.

RESPONSE: No.

Q6. Is there any limit to the maximum size for the placement of the toe stones? The detail shows a minimum size of 3,000 lbs., but no maximum is shown. Please reply?

RESPONSE: Maximum size is 6000 lbs.

Q7. Special Use permit restricts any work on the island to start on December 1, 2003, with no work on Revetment B till January 1, 2004. Question is if Contractor can start work on Revetment A on or around December 1, 2003?

RESPONSE: No, restrictions are due to nesting activities.

Q8. Options No. 1,2,3, and 4 are the revetment tie-backs required for the project. Are these tiebacks associated with specific stations and locations? I may have missed seeing it, but I am unsure of where these tiebacks go and how they are selected for use. Please explain.

RESPONSE: See sheet C-5 Tie-Back Detail and Notes.

Q9. Suggest incorporating cathodic protection (Option #10) with Option #9 (Steel Sheet Piles) for cost effectiveness. It would not make sense to award Option #10 after tie-rods are backfilled, or to pay separate mobilization for Option #10.

RESPONSE: Yes, Option #10 will be awarded at the same time as Option #9.

Q10. General Note 5, Sheet C-2 for the revetment project, and in other locations of the contract, it is indicated that there will be an excess of material. Visual examination during the pre-bid site visit indicated additional erosion since the survey was conducted. Will the revetment alignment be relocated as field conditions dictate or will the Government provide on-site material to restore eroded areas? As an option, can material be excavated from seaward of the existing sheet pile bulkhead at the westerly end of the project, or elsewhere on the island?

RESPONSE: Differences to project site conditions will be handled as a modification to the contract. Changes to the alignment or use of on-site material may be considered at this time.

Q11. Can additional access roads be installed between the construction easement and the construction access road between STA 6+00 and 30+00? This would minimize impact on wildlife as material is being transported to the work areas.

RESPONSE: No, additional access roads will impact nesting areas.

Q12. Please confirm that per Section 00700, 252.236.7005, all of Tern Island is considered the airfield landing area.

RESPONSE: Yes

Q13. General Special Provisions, Paragraph 1.1 of the USFWS Special Use Permit (SUP) allows only 21 permittee personnel to stay on Tern Island. Does this limit the number of contractor personnel assigned to the work to 20 (One position for the Corps Conrep)? Would this number include contractor personnel on tugs and barges?

RESPONSE: Yes, the 21 personnel includes one Corps Construction Representative. This number would not include personnel on tugs and barges.

Q14. Paragraph 2.2, PERMITS, Tern Island Remedial Environmental Requirements, requires contractor to obtain a Special Use Permit from USFWS. Is this in addition to the Special Use Permit included in the specifications? As indicated, what other licenses, approvals and permits will contractor be required to obtain?

RESPONSE: No, Contractor need not obtain a Special Use Permit. Contractor is responsible for all other licenses, approvals and permits required.

Q15. Regarding Paragraph 2.2 Flights, of the USFWS Special Use Permit, may contractor provide independent flight service to Tern Island? If so, is there a limit to the number of flights?

RESPONSE: Independent flight service will not be allowed. Flights will be limited to minimize impact to wildlife on the island.

Q16. Regarding Paragraph 2.7.3 of the USFWS SUP, is there a maximum allowable size generator?

RESPONSE: No.

Q17. Regarding paragraph 2.10 of the USFWS SUP, is contractor responsible for treatment, removal or disposal of sanitary waste, or of wet waste generated by showering or kitchen operations?

RESPONSE: See paragraph 2.11.4 for septic system restrictions. All other disposal of sanitary waste or wet waste is the responsibility of the contractor to dispose of.

Q18. Have all the permits, approvals and compliances noted in Paragraph 5, ASSOCIATED PERMITS OR LICENSES of the 401 Hawaii State Water Quality Application been secured, and does the contractor have any action in these matters?

RESPONSE: No, this action will be the responsibility of the Government.

Q19. Who is responsible for executing the applicable monitoring and assessment plan noted in Paragraph 11 of the 401 application document?

RESPONSE: The contractor.

Q20. Who is responsible for executing the Mitigation/Compensation Plan noted in Paragraph 12 of the 401 application document?

RESPONSE: The contractor.

Q21. Per paragraph 2.2 of the Remediation Environmental Requirements, what additional licenses, approvals or permits are required? Also is contractor required to obtain the USFWS SUP, or is the work covered by the SUP already issued?

RESPONSE: The Army Permit, Water Quality Certification, and Special Use Permit are provided. The contractor shall be responsible for all other permits, licenses, and approvals.

Q22. Suppliers and potential subcontractors are requesting more time to provide the best possible prices. Request that the proposal due date be extended 2-3 weeks.

RESPONSE: Extended to 19 June 2003.

Q23. In paragraph 2 of Section 1.1, there is a reference to Appendix A, which lists the specifications of the Asbestos Abatement Work and Appendix B, the specifications while handling mercury lamps/switches. Are these in a different location than Section 00900?

RESPONSE: See Am-0003.

Q24. In paragraph 3 of Section 1.1, there is a statement that the Government reserves the right to modify this task order to include additional areas in the project site that waste removal and/or soil sampling is needed. Will these areas be delineated prior to the contractor mobilization so that additional waste containers may be obtained?

RESPONSE: Yes, to the extent possible.

Q25. Section 4.5.1 states that the concrete shall be tested for PCB and lead. Is the number of concrete samples included in the total number of samples listed in Table 1?

RESPONSE: Yes.

Q26. Section 4.5.5. Where is the designated backfill location on the island?

RESPONSE: See sheet C-2 for work and storage area.

Q27. The USF&W Special use permit talks about the "permitee" feeding all people on the island and gives a schedule of expected meals required. Does the contractor take over the role of "permitee"? If the contractor has no employees on the island, do we still have to feed the refuge employees? This could amount to a lot of money if the whole 1011 cal days are awarded.

RESPONSE: The contractor need not provide meals if he has no employees on the island.

Q28. The 401 water quality permit will expire on June 24,2004 by our reading of item 3.c.2. Will this permit be extended or modified by the Department of Health? These permits are problematic in this day and age.

RESPONSE: The extension will be pursued by the Government.

Q29. During the last bid R-0002, various amendments were issued answering contractor poised question. I find no reference in the present bid R-0004 which incorporated these answers into this contract. Shouldn't they be amended into this bid?

RESPONSE: Changes were made to the specs/drawings. Questions from previous solicitation may not be relevant.

Q30. The time frame for the sheetwall construction seems alittle off. If the COE awards the base bid only say July 1, 2003 the completion date would be July 1, 2004. If the COE takes the full 180 cal days to award item 14, that award would come Jan 1,2004-to late to order material and drive sheets prior to the shutdown window. This effectively starts the sheetwall Sept 1,2004 but the additional contract time of 190 cal days puts the completion date mid-Jan 2005. This is not enough time to build this wall. Please review this requirement.

RESPONSE: This will be reviewed. Adjustments will be made to the performance period if the shutdown period impacts the start of work.

Q31. AMC contacted USF&W about the us of chartered planes to Tern and it appears that might be considered. If this is an available option we would like to see it incorporated into the bid as we would need to know the maximum number of flights allowable.

RESPONSE: Chartered planes will not be allowed.

PROJECT TABLE OF CONTENTS

-- End of Project Table of Contents --

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
01320

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	CERTIFICATES l.	SAMPLES m.	RECORDS n.	M&M MANUALS o.	CLASSIFICATION: INFORMATION ONLY p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR SCHEDULE DATES: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE v.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			1.1	Preliminary Project Schedule			X									X										
			1.1	Initial Project Schedule			X									X										
			1.1	Periodic Schedule Updates			X									X										
			1.1	Qualifications				X								X										
			1.1	Narrative Report					X						X											
			1.1	Schedule Reports					X						X											

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
01430

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	CERTIFICATE OF SAMPLES l.	O&M MANUALS m.	RECORD DRAWINGS n.	CLASSIFICATION: INFORMATION ONLY p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR ACTION: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE v.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			1.3	Environmental Protection Plan									X		X										

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
01780

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	CERTIFICATE OF COMPLIANCE l.	SAMPLES m.	RECORDS n.	O&M MANUALS o.	CLASSIFICATION: INFORMATION ONLY p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR ACTION: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE y.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			1.2.1	As-Built Drawings									X		X											

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
01900

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	CERTIFICATES l.	SAMPLES m.	O&M MANUALS n.	RECORD DRAWINGS o.	CLASSIFICATION: INFORMATIONAL p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR SCHEDULE DATES: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE y.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			1.1	As-Built Drawings		X								X												
			1.1	Progress Chart			X									X										
			1.1	Inspection of Existing Conditions						X				X												
			1.1	Dust Control									X			X										
			1.1	Excavation/Trenching Clearance									X		X											
			1.1	Condition of Contractor's Operation or Storage Area									X		X											

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
02220

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			1.3	Work Plan					X						X										

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
02300

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES: REPORTS k.	CERTIFICATES: SAMPLES l.	CERTIFICATES: MATERIALS m.	RECORDS n.	O&M MANUALS o.	CLASSIFICATION: INFORMATION ONLY p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR SCHEDULE DATES: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE y.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			1.3	Earthwork					X							X										
			1.3	Testing						X					X											
			1.3	Testing							X				X											

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
02397

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	CERTIFICATES l.	SAMPLES m.	RECORDS n.	M&M MANUALS o.	CLASSIFICATION: INFORMATION ONLY p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR SCHEDULE DATES: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE y.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			2.1	Rubber marine fenders	X									X												
			2.3.2	Bolts, nuts, and washers	X									X												
			2.1	Rubber marine fenders		X								X												
			2.1	Rubber marine fenders						X				X												
			2.3.2	Bolts, nuts, and washers						X				X												

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
02398

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	CERTIFICATE OF SAMPLES l.	RECORDS m.	O&M MANUALS n.	CLASSIFICATION: INFORM ONLY p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	APPROVAL NEEDED BY t.	MATERIAL NEEDED BY u.	CONTRACTOR ACTION: CODE v.	CONTRACTOR ACTION: DATE w.	SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE v.	GOVERNMENT ACTION: DATE z.	REMARKS aa.
			1.2	Pier Timberwork		X							X												
			1.2	Timber Preservative Treatment						X			X												
			1.2	Delivery Inspection List						X			X												

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
02399

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONAL CHANGES h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	CERTIFICATES l.	SAMPLES m.	RECORDS n.	MANUALS o.	CLASSIFICATION: INFORMATION ONLY p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR ACTION: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE y.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			1.2	Marine hardware	X									X												
			1.2	Bolts, nuts, and washers	X									X												
			1.2	Sealants	X									X												
			1.2	Marine hardware		X								X												
			1.2	Marine hardware							X			X												
			1.2	Bolts, nuts, and washers							X			X												
			1.2	Sealants							X			X												

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
02464

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	CERTIFICATES l.	SAMPLES m.	RECORDS n.	O&M MANUALS o.	CLASSIFICATION: INFORMATION ONLY p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR ACTION: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE y.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			2.1	Metal Sheet Piling		X								X												
			3.1.1	Pile Driving Equipment			X							X												
			3.1.5	Pulling and Redriving					X					X												
			2.3.2	Interlocked Joint Strength in Tension Test						X				X												
			2.3.1	Materials Tests						X				X												
			3.1.2.2	Driving									X	X												

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
03202

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	SAMPLES l.	RECORDS m.	O&M MANUALS n.	CLASSIFICATION: INFORM ONLY p.	CLASSIFICATION: GOVT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	APPROVAL NEEDED BY t.	MATERIAL NEEDED BY u.	CODE v.	CONTRACTOR ACTION: DATE w.	SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE v.	DATE z.	REMARKS aa.
			1.2	Reinforcing steel		X							X												
			1.2	Patching					X				X												
			1.2	Coated steel reinforcing bars						X			X												
			1.2	Coating material						X			X												
			1.2	Batch designations of powder coating						X			X												
			1.2	Coating application plant						X			X												

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
03311

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	CERTIFICATES l.	CERTIFICATES m.	O&M MANUALS n.	O&M RECORD DRAWINGS o.	CLASSIFICATION: INFORMATION ONLY p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR SCHEDULE DATES: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE y.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			1.6.1	Mixture design	X									X												
			1.3	Materials for curing	X									X												
			2.2.10	Joint Sealants	X									X												
			2.2.9	Joint Filler	X									X												
			3.2.2	Epoxy coatings	X									X												
			2.2.4	Non-shrink grout	X									X												
			3.2.4	Preformed joint filler	X									X												
			1.6.2.1	Formwork		X								X												
			3.2.3	Construction joints		X								X												
			1.6.4.1	Concrete mixture proportions						X				X												
			1.6.4.2	Fly ash						X				X												
			1.6.4.2	Natural pozzolan						X				X												
			1.6.4.3	Ground iron blast-furnace slag						X				X												
			1.6.4.4	Silica fume						X				X												
			1.6.4.5	Aggregates						X				X												
			1.6.4.6	Admixtures						X				X												
			1.6.4.7	Cement						X				X												
			1.6.4.8	Water						X				X												
			1.3	Curing Compound						X				X												
			1.6.3.1	Curing concrete elements							X			X												
			1.6.3.2	Form removal schedule							X			X												
			1.6.3.3	Concrete placement and compaction							X			X												
			1.6.3.4	Silica fume manufacturer's supplier representative							X			X												
			1.6.3.5	Quality assurance							X			X												
			1.6.3.6	Field testing technician and testing agency							X			X												
			1.6.3.7	Mixture designs							X			X												

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
03410

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	CERTIFICATES l.	SAMPLES m.	RECORDS n.	O&M MANUALS o.	CLASSIFICATION: INFORMATION ONLY p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR ACTION: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE y.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			1.7.2	design calculations	X									X												
			1.7.3	Concrete Mix design	X									X												
			2.2.2.1	inserts	X									X												
			1.7.1	Drawings of precast members		X								X												
			2.1	Contractor-furnished mix design						X					X												
			2.3	Fabrication							X			X												
			1.7.4	batch ticket									X	X												

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
05500

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWING g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	CERTIFICATES l.	SAMPLES m.	RECORDS n.	M&M MANUALS o.	CLASSIFICATION: INFORMATION ONLY p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR ACTION: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE y.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			1.2	Tie-rod system	X									X												
			1.2	Boat hoist		X								X												
			1.2	Tie-rod system		X								X												
			1.2	Steel							X			X												
			1.2	Bolts, nuts, and washers							X			X												
			1.2	Welding electrodes and rods							X			X												
			1.2	Nonshrink grout							X			X												
			1.2	Galvanizing							X			X												

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
09967

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	SAMPLES l.	O&M MANUALS n.	RECORD DRAWINGS o.	CLASSIFICATION: INFORMATION ONLY p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR SCHEDULE DATES: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE y.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			2.1.1.1	Epoxy-polyamide						X			X												
			2.1.1.2	Coal tar epoxy-polyamide						X			X												
			2.2	Tape wrap protection system						X			X												

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
13280A

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	CERTIFICATES l.	SAMPLES m.	RECORDS n.	M&M RECORDS o.	CLASSIFICATION: INFORMATIONAL p.	CLASSIFICATION: GOVERNMENT APPROVED q.	CLASSIFICATION: REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	CONTRACTOR SCHEDULE DATES: APPROVAL NEEDED BY t.	CONTRACTOR SCHEDULE DATES: MATERIAL NEEDED BY u.	CONTRACTOR SCHEDULE DATES: CODE v.	CONTRACTOR ACTION: DATE w.	CONTRACTOR ACTION: SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE y.	GOVERNMENT ACTION: DATE z.	GOVERNMENT ACTION: REMARKS aa.
			1.12	Respiratory Protection Program	X											X										
			3.4	Cleanup and Disposal	X											X										
			1.4	Detailed Drawings	X											X										
			1.4	Materials and Equipment	X										X											
			1.5	Qualifications	X											X										
			1.11	Training Program	X										X											
			1.10	Medical Requirements	X										X											
			3.3	Exposure Assessment and Air Monitoring									X			X										

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION
IMPROVEMENTS TO TERN ISLAND

CONTRACTOR

SPECIFICATION SECTION
13286N

ACTIVITY NO a.	TRANSMITTAL NO. b.	ITEM NO c.	SPECIFICATION PARAGRAPH NUMBER d.	DESCRIPTION OF ITEM SUBMITTED e.	TYPE OF SUBMITTAL: DATA f.	DRAWINGS g.	INSTRUCTIONS h.	SCHEDULES i.	STATEMENTS j.	CERTIFICATES k.	SAMPLES l.	O&M MANUALS n.	CLASSIFICATION: INFORMATION ONLY p.	GOVERNMENT APPROVED q.	REVIEWER r.	CONTRACTOR SCHEDULE DATES: SUBMIT s.	APPROVAL NEEDED BY t.	MATERIAL NEEDED BY u.	CODE v.	CONTRACTOR ACTION: DATE w.	SUBMIT TO GOVERNMENT x.	GOVERNMENT ACTION: CODE v.	DATE z.	REMARKS aa.
			1.8.1	Qualifications of CIH						X				X										
			1.8.1	Training Certification						X				X										
			1.5	Mecrury and Lamp Removal Work Plan						X				X										
			1.5	Mercury and Lamp Disposal Plan						X				X										
			3.4.2	Transporter certification								X		X										
			1.5	Certification of Decontamination								X												
			1.5	Certificate of Disposal and/or recycling								X	X											
			1.5	DD Form 1348-1								X	X											

SECTION TABLE OF CONTENTS

DIVISION 13 - SPECIAL CONSTRUCTION

SECTION 13280A

ASBESTOS ABATEMENT

-- End of Section Table of Contents --

SECTION 13280A

ASBESTOS ABATEMENT

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z87.1	(1989; Errata; Z87.1a) Occupational and Educational Eye and Face Protection
ANSI Z88.2	(1992) Respiratory Protection

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 4397	(1996) Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications

COMPRESSED GAS ASSOCIATION (CGA)

CGA G-7	(1990) Compressed Air for Human Respiration
CGA G-7.1	(1997) Commodity Specification for Air

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH Pub No. 84-100	(1984; Supple 1985, 1987, 1988 & 1990) NIOSH Manual of Analytical Methods

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 340/1-90/018	(1990) Asbestos/NESHAP Regulated Asbestos Containing Materials Guidance
EPA 340/1-90/019	(1990) Asbestos/NESHAP Adequately Wet Guidance

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1926	Safety and Health Regulations for Construction
40 CFR 61	National Emission Standards for Hazardous Air Pollutants
40 CFR 763	Asbestos
42 CFR 84	Approval of Respiratory Protective Devices
49 CFR 107	Hazardous Materials Program Procedures
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
49 CFR 173	Shippers - General Requirements for Shipments and Packagings

UNDERWRITERS LABORATORIES (UL)

HAR 501-504	Asbestos Requirements
HAR 12-145.1	Asbestos and Construction
HAR 16-77 Sub 19	Asbestos Contractors
HAR 12-145.1 Sub 8	Occupational Safety and Health Construction Standards

1.2 DEFINITIONS

a. Adequately Wet: A term defined in 40 CFR 61, Subpart M, and EPA 340/1-90/019 meaning to sufficiently mix or penetrate with liquid to prevent the release of particulate. If visible emissions are observed coming from asbestos-containing material (ACM), then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wetted.

b. Asbestos: Asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophylite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated and/or altered.

c. Asbestos-Containing Material (ACM): Any materials containing more

than one percent asbestos.

d. Asbestos Fiber: A particulate form of asbestos, 5 micrometers or longer, with a length-to-width ratio of at least 3 to 1.

e. Authorized Person: Any person authorized by the Contractor and required by work duties to be present in the regulated areas.

f. Certified Industrial Hygienist (CIH): An Industrial Hygienist certified in the practice of industrial hygiene by the American Board of Industrial Hygiene.

g. Class II Asbestos Work: Activities defined by OSHA involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos - containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastic. Certain "incidental" roofing materials such as mastic, flashing and cements when they are still intact are excluded from Class II asbestos work. Removal of small amounts of these materials which would fit into a glovebag may be classified as a Class III job.

h. Competent Person: In addition to the definition in 29 CFR 1926, Section .32(f), a person who is capable of identifying existing asbestos hazards as defined in 29 CFR 1926, Section .1101, selecting the appropriate control strategy, has the authority to take prompt corrective measures to eliminate them and has EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training; accreditation required by 40 CFR 763, Subpart E, Appendix C.

i. Contractor/Supervisor: Individual who supervises asbestos abatement work and has EPA Model Accreditation Plan "Contractor/Supervisor" training; accreditation required by 40 CFR 763, Subpart E, Appendix C.

j. Demolition: The wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.

k. Disposal Bag: A 6 mil thick, leak-tight plastic bag, pre-labeled in accordance with 29 CFR 1926, Section .1101, used for transporting asbestos waste from containment to disposal site.

l. Disturbance: Activities that disrupt the matrix of ACM, crumble or pulverize ACM, or generate visible debris from ACM. Disturbance includes cutting away small amounts of ACM, no greater than the amount which can be contained in 1 standard sized glovebag or waste bag, not larger than 60 inches in length and width in order to access a building component.

m. Equipment Room or Area: An area adjacent to the regulated area used for the decontamination of employees and their equipment.

n. Employee Exposure: That exposure to airborne asbestos that would

occur if the employee were not using respiratory protective equipment.

o. Fiber: A fibrous particulate, 5 micrometers or longer, with a length to width ratio of at least 3 to 1.

p. High-Efficiency Particulate Air (HEPA) Filter: A filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.

q. Homogeneous Area: An area of surfacing material or thermal system insulation that is uniform in color and texture.

r. Industrial Hygienist: A professional qualified by education, training, and experience to anticipate, recognize, evaluate, and develop controls for occupational health hazards.

s. Intact: ACM which has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix. Removal of "intact" asphaltic, resinous, cementitious products does not render the ACM non-intact simply by being separated into smaller pieces.

t. Model Accreditation Plan (MAP): USEPA training accreditation requirements for persons who work with asbestos as specified in 40 CFR 763, Subpart E, Appendix C.

u. Modification: A changed or altered procedure, material or component of a control system, which replaces a procedure, material or component of a required system.

v. Negative Exposure Assessment: A demonstration by the Contractor to show that employee exposure during an operation is expected to be consistently below the OSHA Permissible Exposure Limits (PELs).

w. NESHAP: National Emission Standards for Hazardous Air Pollutants. The USEPA NESHAP regulation for asbestos is at 40 CFR 61, Subpart M.

x. Nonfriable ACM: A NESHAP term defined in 40 CFR 61, Subpart M and EPA 340/1-90/018 meaning any material containing more than 1 percent asbestos, as determined using the method specified in 40 CFR 763, Subpart E, Appendix A, Section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

y. Nonfriable ACM (Category I): A NESHAP term defined in 40 CFR 61, Subpart E and EPA 340/1-90/018 meaning asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in 40 CFR 763, Subpart F, Appendix A, Section 1, Polarized Light Microscopy.

z. Nonfriable ACM (Category II): A NESHAP term defined in 40 CFR 61,

Subpart E and EPA 340/1-90/018 meaning any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos, as determined using the methods specified in 40 CFR 763, Subpart F, Appendix A, Section 1, Polarized Light Microscopy, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

aa. Permissible Exposure Limits (PELs):

(1) PEL-Time weighted average(TWA): Concentration of asbestos not in excess of 0.1 fibers per cubic centimeter of air (f/cc) as an 8 hour time weighted average (TWA), as determined by the method prescribed in 29 CFR 1926, Section .1101, Appendix A, or the current version of NIOSH Pub No. 84-100 analytical method 7400.

(2) PEL-Excursion Limit: An airborne concentration of asbestos not in excess of 1.0 f/cc of air as averaged over a sampling period of 30 minutes as determined by the method prescribed in 29 CFR 1926, Section .1101, Appendix A, or the current version of NIOSH Pub No. 84-100 analytical method 7400.

bb. Regulated Area: An OSHA term defined in 29 CFR 1926, Section .1101 meaning an area established by the Contractor to demarcate areas where Class I, II, and III asbestos work is conducted; also any adjoining area where debris and waste from such asbestos work accumulate; and an area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed, the permissible exposure limit.

cc. Removal: All operations where ACM is taken out or stripped from structures or substrates, and includes demolition operations.

dd. Spills/Emergency Cleanups: Cleanup of sizable amounts of asbestos waste and debris which has occurred, for example, when water damage occurs in a building, and sizable amounts of ACM are dislodged. A Competent Person evaluates the site and ACM to be handled, and based on the type, condition and extent of the dislodged material, classifies the cleanup as Class I, II, or III. Only if the material was intact and the cleanup involves mere contact of ACM, rather than disturbance, could there be a Class IV classification.

ee. Surfacing ACM: Asbestos-containing material which contains more than 1% asbestos and is sprayed-on, troweled-on, or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.

ff. Thermal system insulation (TSI) ACM: ACM which contains more than 1% asbestos and is applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat loss or gain or water condensation.

gg. Transite: A generic name for asbestos cement wallboard and pipe.

hh. Worker: Individual (not designated as the Competent Person or a supervisor) who performs asbestos work and has completed asbestos worker training required by 29 CFR 1926, Section .1101, to include EPA Model Accreditation Plan (MAP) "Worker" training; accreditation required by 40 CFR 763, Subpart E, Appendix C, if required by the OSHA Class of work to be performed or by the state where the work is to be performed.

1.3 DESCRIPTION OF WORK

The work covered by this section includes the removal of asbestos-containing materials (ACM) which are encountered at a landfill created by the U.S. Coast Guard during its occupation and ownership before mill. Cleanup activities associated with this project describes procedures and equipment required to protect workers and occupants of the regulated area from contact with airborne asbestos fibers and ACM dust and debris. Activities include OSHA Class II work operations involving ACM. The work also includes containment, storage, transportation and disposal of the generated ACM wastes. More specific operational procedures shall be detailed in the required Accident Prevention Plan and its subcomponents, the Asbestos Hazard Abatement Plan and Activity Hazard Analyses required in paragraph SAFETY AND HEALTH PROGRAM AND PLANS.

1.3.1 Abatement Work Tasks

The Contractor shall be responsible to remove asbestos containing, materials (ACM) from a containing, materials (ACM) from a construction dumpsite on Tern Island. ACM known to be present is asbestos floor tiles. The abatement may include segregating the building materials that contain asbestos (VAT). The materials are in a wet state since the site is close to the H_20. There may be a possibility of having transite material (panels, corrugated panels or pipes).

A summary of work task data elements for each individual ACM abatement work task to include the appropriate RESPONSE ACTION DETAIL SHEET.

1.4 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Data

Respiratory Protection Program; GA

Records of the respirator program.

Cleanup and Disposal; GA

Waste shipment records. Weigh bills and delivery tickets shall be

furnished for information only.

Detailed Drawings; GA

Descriptions, detail project drawings, and site layout to include worksite containment area techniques as prescribed on applicable SET-UP DETAIL SHEETS, local exhaust ventilation system locations, decontamination units and load-out units, other temporary waste storage facility, access tunnels, location of temporary utilities (electrical, water, sewer) and boundaries of each regulated area.

Materials and Equipment; FIO

Manufacturer's catalog data for all materials and equipment to be used in the work, including brand name, model, capacity, performance characteristics and any other pertinent information. Test results and certificates from the manufacturer of encapsulants substantiating compliance with performance requirements of this specification. Material Safety Data Sheets for all chemicals to be used onsite in the same format as implemented in the Contractor's HAZARD COMMUNICATION PROGRAM. Data shall include, but shall not be limited to, the following items:

a. Vacuum cleaning equipment

b. Air monitoring equipment

c. Respirators

d. Personal protective clothing and equipment

(1) Coveralls
(2) Other work clothing
(3) Hard hats
(4) Eye protection
(5) Other items required and approved by Contractors Designated IH and Competent Person

e. Duct Tape

f. Disposal Containers

(1) Disposal bags

g. Sheet Plastic

(1) Polyethylene Sheet - General

h. Other items

i. Material Safety Data Sheets (for all chemicals proposed)

Qualifications; GA

A written report providing evidence of qualifications for personnel,

facilities and equipment assigned to the work.

Training Program; FIO

A copy of the written project site-specific training material as indicated in 29 CFR 1926, Section .1101 that will be used to train onsite employees. The training document shall be signed by the Contractor's Designated IH and Competent Person.

Medical Requirements; FIO

Physician's written opinion.

Certificates stating that encapsulants meet the applicable specified performance requirements.

SD-18 Records

Exposure Assessment and Air Monitoring; GA

Initial exposure assessments, negative exposure assessments, air-monitoring results and documentation.

1.5 QUALIFICATIONS

1.5.1 Written Qualifications and Organization Report

The Contractor shall furnish a written qualifications and organization report providing evidence of qualifications of the Contractor, Contractor's Project Supervisor, Designated Competent Person, supervisors and workers; Designated IH (person assigned to project and firm name); independent testing laboratory (including name of firm, principal, and analysts who will perform analyses); all subcontractors to be used including disposal transportation and disposal facility firms, subcontractor supervisors, subcontractor workers; and any others assigned to perform asbestos abatement and support activities. The report shall include an organization chart showing the Contractor's staff organization for this project by name and title, chain of command and reporting relationship with all subcontractors. The report shall be signed by the Contractor, the Contractor's onsite project manager, Designated Competent Person, Designated IH, designated testing laboratory and the principals of all subcontractors to be used. The Contractor shall include the following statement in the report: "By signing this report I certify that the personnel I am responsible for during the course of this project fully understand the contents of 29 CFR 1926, Section .1101, 40 CFR 61, Subpart M, and the federal, state and local requirements specified in paragraph SAFETY AND HEALTH PROGRAM AND PLANS for those asbestos abatement activities that they will be involved in."

1.5.2 Specific Requirements

The Contractor shall designate in writing, personnel meeting the following

qualifications:

a. Designated Competent Person: The name, address, telephone number, and resume of the Contractor's Designated Competent Person shall be provided. Evidence that the full-time Designated Competent Person is qualified in accordance with 29 CFR 1926, Sections .32 and .1101, has EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C, and is experienced in the administration and supervision of asbestos abatement projects, including exposure assessment and monitoring, work practices, abatement methods, protective measures for personnel, setting up and inspecting asbestos abatement work areas, evaluating the integrity of containment barriers, placement and operation of local exhaust systems, ACM generated waste containment and disposal procedures, decontamination units installation and maintenance requirements, site safety and health requirements, notification of other employees onsite, etc. The duties of the Competent Person shall include the following: controlling entry to and exit from the regulated area; supervising any employee exposure monitoring required by 29 CFR 1926, Section .1101; ensuring that all employees working within a regulated area wear the appropriate personal protective equipment (PPE), are trained in the use of appropriate methods of exposure control, and use the hygiene facilities and decontamination procedures specified; and ensuring that engineering controls in use are in proper operating conditions and are functioning properly. The Designated Competent Person shall be responsible for compliance with applicable federal, state and local requirements, the Contractor's Accident Prevention Plan and Asbestos Hazard Abatement Plan. The Designated Competent Person shall provide, and the Contractor shall submit, the "Contractor/Supervisor" course completion certificate and the most recent certificate for required refresher training with the employee "Certificate of Worker Acknowledgment" required by this paragraph. The Contractor shall submit evidence that this person has a minimum of 2 years of on-the-job asbestos abatement experience relevant to OSHA competent person requirements. The Designated Competent Person shall be onsite at all times during the conduct of this project.

b. Project and Other Supervisors: The Contractor shall provide the name, address, telephone number, and resume of the Project Supervisor and other supervisors who have responsibility to implement the Accident Prevention Plan, including the Asbestos Hazard Abatement Plan and Activity Hazard Analyses, the authority to direct work performed under this contract and verify compliance, and have EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C. The Project Supervisor and other supervisors shall provide, and the Contractor shall submit, the "Contractor/Supervisor" course completion certificate and the most recent certificate for required refresher training with the employee "Certificate of Worker Acknowledgment" required by this paragraph. The Contractor shall submit evidence that the Project

Supervisor has a minimum of 2 years of on-the-job asbestos abatement experience relevant to project supervisor responsibilities and the other supervisors have a minimum of 2 years on-the-job asbestos abatement experience commensurate with the responsibilities they will have on this project.

c. Designated Industrial Hygienist: The Contractor shall provide the name, address, telephone number, resume and other information specified below for the Industrial Hygienist (IH) selected to prepare the Contractor's Asbestos Hazard Abatement Plan, prepare and perform training, direct air monitoring and assist the Contractor's Competent Person in implementing and ensuring that safety and health requirements are complied with during the performance of all required work. The Designated IH shall be a person who is board eligible (meets all education and experience requirements) as determined and documented by the American Board of Industrial Hygiene (ABIH), has EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C, and has a minimum of 2 years of comprehensive experience in planning and overseeing asbestos abatement activities. The Designated IH shall provide, and the Contractor shall submit, the "Contractor/Supervisor" course completion certificate and the most recent certificate for required refresher training with the employee "Certificate of Worker Acknowledgment" required by this paragraph. The Designated IH shall be completely independent from the Contractor according to federal, state, or local regulations; that is, shall not be a Contractor's employee or be an employee or principal of a firm in a business relationship with the Contractor negating such independent status. A copy of the Designated IH's current valid ABIH confirmation of eligibility in writing from the ABIH shall be included. The Designated IH shall be onsite at all times for the duration of asbestos activities and shall be available for emergencies. In addition, the Designated IH shall prepare, and the Contractor shall submit, the name, address, telephone numbers and resumes of additional IH's and industrial hygiene technicians (IHT) who will be assisting the Designated IH in performing onsite tasks. IHs and IHTs supporting the Designated IH shall have a minimum of 2 years of practical onsite asbestos abatement experience. The formal reporting relationship between the Designated IH and the support IHs and IHTs, the Designated Competent Person, and the Contractor shall be indicated.

d. Asbestos Abatement Workers: Asbestos abatement workers shall meet the requirements contained in 29 CFR 1926, Section .1101, 40 CFR 61, Subpart M, and other applicable federal, state and local requirements. Worker training documentation shall be provided as required on the "Certificate of Workers Acknowledgment" in this paragraph.

e. Worker Training and Certification of Worker Acknowledgment: Training documentation will be required for each employee who will perform OSHA Class I, Class II, Class III, or Class IV asbestos abatement operations. Such documentation shall be submitted on a

Contractor generated form titled "Certificate of Workers Acknowledgment", to be completed for each employee in the same format and containing the same information as the example certificate at the end of this section. Training course completion certificates (initial and most recent update refresher) required by the information checked on the form shall be attached.

f. Physician: The Contractor shall provide the name, medical qualifications, address, telephone number and resume of the physician who will or has performed the medical examinations and evaluations of the persons who will conduct the asbestos abatement work tasks. The physician shall be currently licensed by the state where the workers will be or have been examined, have expertise in pneumoconiosis and shall be responsible for the determination of medical surveillance protocols and for review of examination/test results performed in compliance with 29 CFR 1926, Section .1101 and paragraph MEDICAL REQUIREMENTS. The physician shall be familiar with the site's hazards and the scope of this project.

g. First Aid and CPR Trained Persons: The names of at least 2 persons who are currently trained in first aid and CPR by the American Red Cross or other approved agency shall be designated and shall be onsite at all times during site operations. They shall be trained in universal precautions and the use of PPE as described in the Bloodborne Pathogens Standard of 29 CFR 1910, Section .1030 and shall be included in the Contractor's Bloodborne Pathogen Program. These persons may perform other duties but shall be immediately available to render first aid when needed. A copy of each designated person's current valid First Aid and CPR certificate shall be provided.

h. Independent Testing Laboratory: The Contractor shall provide the name, address and telephone number of the independent testing laboratory selected to perform the sample analyses and report the results. The testing laboratory shall be completely independent from the Contractor as recognized by federal, state or local regulations. Written verification of the following criteria, signed by the testing laboratory principal and the Contractor, shall be submitted:

(1) Phase contrast microscopy (PCM): The laboratory is fully equipped and proficient in conducting PCM of airborne samples using the methods specified by 29 CFR 1926, Section .1101, OSHA method ID-160, the most current version of NIOSH Pub No. 84-100 Method 7400, and NIOSH Pub No. 84-100 Method 7402, transmission electron microscopy (TEM); the laboratory is currently judged proficient (classified as acceptable) in counting airborne asbestos samples by PCM by successful participation in each of the last 4 rounds in the American Industrial Hygiene Association (AIHA) Proficiency Analytical Testing (PAT) Program; the names of the selected microscopists who will analyze airborne samples by PCM with verified documentation of their proficiency to conduct PCM analyses by being judged proficient in counting samples as

current participating analysts in the AIHA PAT Program, and having successfully completed the Asbestos Sampling and Analysis course (NIOSH 582 or equivalent) with a copy of course completion certificate provided; when the PCM analysis is to be conducted onsite, documentation shall be provided certifying that the onsite analyst meets the same requirements.

(2) PCM: The laboratory is fully equipped and each analyst (name shall be provided) possesses demonstrated proficiency in conducting PCM and TEM analysis of airborne samples using NIOSH Pub No. 84-100Method 7400 PCM.

i. Disposal Facility, Transporter: The Contractor shall provide written evidence that the landfill to be used is approved for asbestos disposal by the USEPA and state and local regulatory agencies. Copies of signed agreements between the Contractor (including subcontractors and transporters) and the asbestos waste disposal facility to accept and dispose of all asbestos containing waste generated during the performance of this contract shall be provided. Qualifications shall be provided for each subcontractor or transporter to be used, indicating previous experience in transport and disposal of asbestos waste to include all required state and local waste hauler requirements for asbestos. The Contractor and transporters shall meet the DOT requirements of 49 CFR 171, 49 CFR 172, and 49 CFR 173 as well as registration requirements of 49 CFR 107 and other applicable state or local requirements. The disposal facility shall meet the requirements of 40 CFR 61, Sections .154 or .155, as required in 40 CFR 61, Section .150(b), and other applicable state or local requirements.

1.5.3 Federal, State or Local Citations on Previous Projects

The Contractor and all subcontractors shall submit a statement, signed by an officer of the company, containing a record of any citations issued by Federal, State or local regulatory agencies relating to asbestos activities (including projects, dates, and resolutions); a list of penalties incurred through non-compliance with asbestos project specifications, including liquidated damages, overruns in scheduled time limitations and resolutions; and situations in which an asbestos-related contract has been terminated (including projects, dates, and reasons for terminations). If there are none, a negative declaration signed by an officer of the company shall be provided.

1.6 REGULATORY REQUIREMENTS

In addition to detailed requirements of this specification, work performed under this contract shall comply with EM 385-1-1, applicable federal, state, and local laws, ordinances, criteria, rules and regulations regarding handling, storing, transporting, and disposing of asbestos waste materials. This includes, but is not limited to, OSHA standards, 29 CFR 1926, especially Section .1101, 40 CFR 61, Subpart M and 40 CFR 763. Matters of interpretation of standards shall be submitted to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria,

ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply. The following state and local laws, rules and regulations regarding removal, cleanup, handling, storing, transporting and disposing of asbestos material apply: HAR 12-145.1 and HAR 501-504.

1.7 SAFETY AND HEALTH PROGRAM AND PLANS

The Contractor shall develop and submit a written comprehensive site-specific Accident Prevention Plan at least 30 days prior to the preconstruction conference. The Accident Prevention Plan shall address requirements of EM 385-1-1, Appendix A, covering onsite work to be performed by the Contractor and subcontractors. The Accident Prevention Plan shall incorporate an Asbestos Hazard Abatement Plan, and Activity Hazard Analyses as separate appendices into 1 site specific Accident Prevention Plan document. Any portions of the Contractor's overall Safety and Health Program that are referenced in the Accident Prevention Plan, e.g., respirator program, hazard communication program, confined space entry program, etc., shall be included as appendices to the Accident Prevention Plan. The plan shall take into consideration all the individual asbestos abatement work tasks identified in Table 1. The plan shall be prepared, signed (and sealed, including certification number if required), and dated by the Contractor's Designated IH, Competent Person, and Project Supervisor.

1.7.1 Asbestos Hazard Abatement Work Plan Appendix

The work plan shall be site specific and describes what materials will be abated and the proper method of Abatement for each ACM. The Asbestos Hazard Abatement Plan appendix to the Accident Prevention Plan shall include, but not be limited to, the following:

a. The personal protective equipment to be used;

b. The location and description of regulated areas including clean and dirty areas,access tunnels, and decontamination unit (clean room, shower room, equipment room, storage areas such as load-out unit);

c. Initial exposure assessment in accordance with 29 CFR 1926, Section .1101;

d. Level of supervision;

e. Method of notification of other employers at the worksite;

f. Abatement method to include containment and control procedures;

g. Interface of trades involved in the construction;

h. Sequencing of asbestos related work;

i. Storage and disposal procedures and plan;

j. Type of wetting agent and asbestos encapsulant to be used;

k. Location of local exhaust equipment;

l. Air monitoring methods (personal, environmental and clearance);

m. Bulk sampling and analytical methods (if required);

n. A detailed description of the method to be employed in order to control the spread of ACM wastes and airborne fiber concentrations;

o. Fire and medical emergency response procedures;

p. The security procedures to be used for all regulated areas.

1.7.2 Activity Hazard Analyses Appendix

Activity Hazard Analyses, for each major phase of work, shall be submitted and updated during the project. The Activity Hazard Analyses format shall be in accordance with EM 385-1-1 (Figure 1-1). The analysis shall define the activities to be performed for a major phase of work, identify the sequence of work, the specific hazards anticipated, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level. Work shall not proceed on that phase until the Activity Hazard Analyses has been accepted and a preparatory meeting has been conducted by the Contractor to discuss its contents with everyone engaged in the activities, including the onsite Government representatives. The Activity Hazard Analyses shall be continuously reviewed and, when appropriate, modified to address changing site conditions or operations.

1.8 PRECONSTRUCTION CONFERENCE AND ONSITE SAFETY

The Contractor and the Contractor's Designated Competent Person, Project Supervisor, and Designated IH shall meet with the Contracting Officer prior to beginning work at a safety preconstruction conference to discuss the details of the Contractor's submitted Accident Prevention Plan to include the Asbestos Hazard Abatement Plan and Activity Hazard Analyses appendices. Deficiencies in the Accident Prevention Plan will be discussed and the Accident Prevention Plan shall be revised to correct the deficiencies and resubmitted for acceptance. Any changes required in the specification as a result of the Accident Prevention Plan shall be identified specifically in the plan to allow for free discussion and acceptance by the Contracting Officer, prior to the start of work. Onsite work shall not begin until the Accident Prevention Plan has been accepted. A copy of the written Accident Prevention Plan shall be maintained onsite. Changes and modifications to the accepted Accident Prevention Plan shall be made with the knowledge and concurrence of the Designated IH, the Project Supervisor, Designated Competent Person, and the Contracting Officer. Should any unforeseen hazard become evident during the performance of the work, the Designated IH shall bring such hazard to the attention of the Project Supervisor, Designated Competent Person, and the Contracting Officer, both verbally and in writing, for resolution as soon as possible. In the interim, all necessary action shall be taken by the Contractor to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment. Once accepted by the Contracting Officer,

the Accident Prevention Plan, including the Asbestos Hazard Abatement Plan and Activity Hazard Analyses will be enforced as if an addition to the contract. Disregarding the provisions of this contract or the accepted Accident Prevention Plan will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

1.9 SECURITY

A demarcated area shall be provided for each regulated area. A log book shall be kept documenting entry into and out of the regulated area. Entry into regulated areas shall only be by personnel authorized by the Contractor and the Contracting Officer. Personnel authorized to enter regulated areas shall be trained, be medically evaluated, and wear the required personal protective equipment for the specific regulated area to be entered.

1.10 MEDICAL REQUIREMENTS

Medical requirements shall conform to 29 CFR 1926, Section .1101.

1.10.1 Medical Examinations

Before being exposed to airborne asbestos fibers, workers shall be provided with a medical examination as required by 29 CFR 1926, Section .1101 and other pertinent state or local requirements. This requirement shall have been satisfied within the last 12 months. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos and within 30 calendar days before or after the termination of employment in such occupation. X-ray films of asbestos workers shall be identified to the consulting radiologist and medical record jackets shall be marked with the word "asbestos."

1.10.1.1 Information Provided to the Physician

The Contractor shall provide the following information in writing to the examining physician:

a. A copy of 29 CFR 1926, Section .1101 and Appendices D, E, G, and I;

b. A description of the affected employee's duties as they relate to the employee's exposure;

c. The employee's representative exposure level or anticipated exposure level;

d. A description of any personal protective and respiratory equipment used or to be used;

e. Information from previous medical examinations of the affected employee that is not otherwise available to the examining physician.

1.10.1.2 Written Medical Opinion

For each worker, a written medical opinion prepared and signed by a licensed physician indicating the following:

a. Summary of the results of the examination.

b. The potential for an existing physiological condition that would place the employee at an increased risk of health impairment from exposure to asbestos.

c. The ability of the individual to wear personal protective equipment, including respirators, while performing strenuous work tasks under cold and/or heat stress conditions.

d. A statement that the employee has been informed of the results of the examination, provided with a copy of the results, informed of the increased risk of lung cancer attributable to the combined effect of smoking and asbestos exposure, and informed of any medical condition that may result from asbestos exposure.

1.10.2 Medical and Exposure Records

Complete and accurate records shall be maintained of each employee's medical examinations, medical records, and exposure data, as required by 29 CFR 1910, Section .1910.20 and 29 CFR 1926, Section .1101 for a period of 50 years after termination of employment. Records of the required medical examinations and exposure data shall be made available, for inspection and copying, to the Assistant Secretary of Labor for Occupational Safety and Health (OSHA) or authorized representatives of the employee and an employee's physician upon request of the employee or former employee. A copy of the required medical certification for each employee shall be maintained on file at the worksite for review, as requested by the Contracting Officer or the representatives.

1.11 TRAINING PROGRAM

1.11.1 General Training Requirements

The Contractor shall establish a training program as specified by EPA Model Accreditation Plan (MAP), training requirements at 40 CFR 763, Subpart E, Appendix C, the State of HI regulation no. HAR 501-504, OSHA requirements at 29 CFR 1926, Section .1101(k)(9), and this specification. Contractor employees shall complete the required training for the type of work they are to perform and such training shall be documented and provided to the Contracting Officer as specified in paragraph QUALIFICATIONS.

1.11.2 Project Specific Training

Prior to commencement of work, each worker shall be instructed by the Contractor's Designated IH and Competent Person in the following project specific training:

a. The hazards and health effects of the specific types of ACM to be abated;

b. The content and requirements of the Contractor's Accident Prevention Plan to include the Asbestos Hazard Abatement Plan and Activity Hazard Analyses and site-specific safety and health precautions;

c. Hazard Communication Program;

d. Hands-on training for each asbestos abatement technique to be employed;

e. Heat and/or cold stress monitoring specific to this project;

f. Air monitoring program and procedures;

g. Medical surveillance to include medical and exposure record-keeping procedures;

h. The association of cigarette smoke and asbestos-related disease;

i. Security procedures;

j. Specific work practice controls and engineering controls required for each Class of work in accordance with 29 CFR 1926, Section .1101.

1.12 RESPIRATORY PROTECTION PROGRAM

The Contractor's Designated IH shall establish in writing, and implement a respiratory protection program in accordance with 29 CFR 1926, Section .1101, 29 CFR 1910, Section .134, ANSI Z88.2, CGA G-7, CGA G-7.1 and DETAIL SHEET 12. The Contractor's Designated IH shall establish minimum respiratory protection requirements based on measured or anticipated levels of airborne asbestos fiber concentrations encountered during the performance of the asbestos abatement work. The Contractor's respiratory protection program shall include, but not be limited to, the following elements:

a. The company policy, used for the assignment of individual responsibility, accountability, and implementation of the respiratory protection program.

b. The standard operating procedures covering the selection and use of respirators. Respiratory selection shall be determined by the hazard to which the worker is exposed.

c. Medical evaluation of each user to verify that the worker may be assigned to an activity where respiratory protection is required.

d. Training in the proper use and limitations of respirators.

e. Respirator fit-testing, i.e., quantitative, qualitative and individual functional fit checks.

f. Regular cleaning and disinfection of respirators.

g. Routine inspection of respirators during cleaning and after each

use when designated for emergency use.

h. Storage of respirators in convenient, clean, and sanitary locations.

i. Surveillance of regulated area conditions and degree of employee exposure (e.g., through air monitoring).

j. Regular evaluation of the continued effectiveness of the respiratory protection program.

k. Recognition and procedures for the resolution of special problems as they affect respirator use (e.g., no facial hair that comes between the respirator face piece and face or interferes with valve function; prescription eye wear usage; contact lenses usage; etc.).

l. Proper training in putting on and removing respirators.

1.12.1 Respiratory Fit Testing

A qualitative or quantitative fit test conforming to 29 CFR 1926, Section 1101, Appendix C shall be conducted by the Contractor's Designated IH for each Contractor worker required to wear a respirator, and for the Contracting Officer and authorized visitors who enter a regulated area where respirators are required to be worn. A respirator fit test shall be performed for each worker wearing a negative-pressure respirator prior to initially wearing a respirator on this project and every 6 months thereafter. The qualitative fit tests may be used only for testing the fit of half-mask respirators where they are permitted to be worn, or of full-facepiece air purifying respirators where they are worn at levels at which half-facepiece air purifying respirators are permitted. If physical changes develop that will affect the fit, a new fit test for the worker shall be performed. Functional fit checks shall be performed by employees each time a respirator is put on and in accordance with the manufacturer's recommendation.

1.12.2 Respirator Selection and Use Requirements

The Contractor shall provide respirators, and ensure that they are used as required by 29 CFR 1926, Section .1101 and in accordance with the manufacturer's recommendations. Respirators shall be jointly approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health (MSHA/NIOSH), or by NIOSH, under the provisions of 42 CFR 84, for use in environments containing airborne asbestos fibers. Personnel who handle ACM, enter regulated areas that require the wearing of a respirator, or who are otherwise carrying out abatement activities that require the wearing of a respirator, shall be provided with approved respirators that are fully protective of the worker at the measured or anticipated airborne asbestos concentration level to be encountered. For air-purifying respirators, the particulate filter portion of the cartridges or canister approved for use in airborne asbestos environments shall be high-efficiency particulate air (HEPA). The initial respirator selection and the decisions regarding the upgrading or

downgrading of respirator type shall be made by the Contractor's Designated IH based on the measured or anticipated airborne asbestos fiber concentrations to be encountered. Recommendations made by the Contractor's Designated IH to downgrade respirator type shall be submitted in writing to the Contracting Officer. The Contractor's Designated Competent Person in consultation with the Designated IH, shall have the authority to take immediate action to upgrade or downgrade respiratory type when there is an immediate danger to the health and safety of the wearer. Respirators shall be used in the following circumstances:

a. During all Class II work where the ACM is not removed in a substantially intact state.

b. During all Class II and III asbestos jobs where the Contractor does not produce a negative exposure assessment.

c. During all work where employees are exposed above the PEL-TWA or PEL-Excursion Limit.

d. In emergencies

1.12.3 Class II and III Work

The Contractor shall provide an air purifying respirator, other than a disposable respirator, equipped with high-efficiency filters whenever the employee performs Class II and III asbestos jobs where the Contractor does not produce a negative exposure assessment ; and Class III jobs where TSI or surfacing ACM is being disturbed.

1.12.4 Sanitation

Employees who wear respirators shall be permitted to leave work areas to wash their faces and respirator facepieces whenever necessary to prevent skin irritation associated with respirator use.

1.13 HAZARD COMMUNICATION PROGRAM

A hazard communication program shall be established and implemented in accordance with 29 CFR 1926, Section .59. Material safety data sheets (MSDSs) shall be provided for all hazardous materials brought onto the worksite. One copy shall be provided to the Contracting Officer and 1 copy shall be included in the Contractor's Hazard Communication Program.

1.14 LICENSES, PERMITS AND NOTIFICATIONS

1.14.1 General Legal Requirements

Necessary licenses, permits and notifications shall be obtained in conjunction with the project's asbestos abatement, transportation and disposal actions and timely notification furnished of such actions as required by federal, state, regional, and local authorities. The Contractor shall notify the Regional Office of the USEPA and the Contracting Officer in writing, at least 10 days prior to the commencement of work, in accordance with 40 CFR 61, Subpart M, and state and local

requirements to include the mandatory "Notification of Demolition and Renovation Record" form and other required notification documents. Notification shall be by Certified Mail, Return Receipt Requested. The Contractor shall furnish copies of the receipts to the Contracting Officer, in writing, prior to the commencement of work. Local fire department shall be notified 3 days before fire-proofing material is removed from a building and the notice shall specify whether or not the material contains asbestos. A copy of the rental company's written acknowledgment and agreement shall be provided as required by paragraph RENTAL EQUIPMENT. For licenses, permits, and notifications that the Contractor is responsible for obtaining, the Contractor shall pay any associated fees or other costs incurred.

1.14.2 Litigation and Notification

The Contractor shall notify the Contracting Officer if any of the following occur:

a. The Contractor or any of the subcontractors are served with notice of violation of any law, regulation, permit or license which relates to this contract;

b. Proceedings are commenced which could lead to revocation of related permits or licenses; permits, licenses or other Government authorizations relating to this contract are revoked;

c. Litigation is commenced which would affect this contract;

d. The Contractor or any of the subcontractors become aware that their equipment or facilities are not in compliance or may fail to comply in the future with applicable laws or regulations.

1.15 PERSONAL PROTECTIVE EQUIPMENT

Three complete sets of personal protective equipment shall be made available to the Contracting Officer and authorized visitors for entry to the regulated area. Contracting Officer and authorized visitors shall be provided with training equivalent to that provided to Contractor employees in the selection, fitting, and use of the required personal protective equipment and the site safety and health requirements. Contractor workers shall be provided with personal protective clothing and equipment and the Contractor shall ensure that it is worn properly. The Contractor's Designated IH and Designated Competent Person shall select and approve all the required personal protective clothing and equipment to be used.

1.15.1 Respirators

Respirators shall be in accordance with paragraph RESPIRATORY PROTECTION PROGRAM.

1.15.2 Whole Body Protection

Personnel exposed to airborne concentrations of asbestos that exceed the PELs, or for all OSHA Classes of work for which a required negative

exposure assessment is not produced, shall be provided with whole body protection and such protection shall be worn properly. The Contractor's Designated IH and Competent Person shall select and approve the whole body protection to be used. The Competent Person shall examine work suits worn by employees at least once per work shift for rips or tears that may occur during performance of work. When rips or tears are detected while an employee is working, rips and tears shall be immediately mended, or the work suit shall be immediately replaced. Disposable whole body protection shall be disposed of as asbestos contaminated waste upon exiting from the regulated area. Reusable whole body protection worn shall be either disposed of as asbestos contaminated waste upon exiting from the regulated area or be properly laundered in accordance with 29 CFR 1926, Section .1101. Whole body protection used for asbestos abatement shall not be removed from the worksite by a worker to be cleaned. Recommendations made by the Contractor's Designated IH to downgrade whole body protection shall be submitted in writing to the Contracting Officer. The Contractor's Designated Competent Person, in consultation with the Designated IH, has the authority to take immediate action to upgrade or downgrade whole body protection when there is an immediate danger to the health and safety of the wearer.

1.15.2.1 Coveralls

Disposable-breathable coveralls with a zipper front shall be provided. Sleeves shall be secured at the wrists, and foot coverings secured at the ankles. See DETAIL SHEET 13.

1.15.2.2 Gloves

Gloves shall be provided to protect the hands. Where there is the potential for hand injuries (i.e., scrapes, punctures, cuts, etc.) a suitable glove shall be provided and used.

1.15.2.3 Protective Eye Wear

Eye protection provided shall be in accordance with ANSI Z87.1.

1.16 HYGIENE FACILITIES AND PRACTICES

The Contractor shall establish a decontamination area for the decontamination of employees, material and equipment. The Contractor shall ensure that employees enter and exit the regulated area through the decontamination area.

1.16.1 Decontamination Requirements

The Contractor shall ensure that employees performing Abatement work within a regulated area comply with the hygiene practice required of employees performing work which has a higher classification within that regulated area, or the Contractor shall provide alternate decontamination area facilities for employees cleaning up debris and material.

1.16.2 Decontamination Area Exit Procedures

The Contractor shall ensure that the following procedures are followed for the outdoor abatement work:

a. Before leaving the regulated area, respirators shall be worn while employees remove all gross contamination and debris from their work clothing using a HEPA vacuum.

b. Employees shall remove their protective clothing in a demarcated designated area deposit the clothing in labeled impermeable bags or containers.

c. Employees shall not remove their respirators in the demarcated area. It shall be removed after tyrek is removed and disposed..

1.16.3 Lunch Areas

The Contractor shall provide lunch areas in which the airborne concentrations of asbestos are below 0.01 f/cc.

1.16.4 Smoking

Smoking, if allowed by the Contractor, shall only be permitted in designated areas approved by the Contracting Officer.

1.17 REGULATED AREAS

All Class I, II, and III asbestos work shall be conducted within regulated areas. The regulated area shall be demarcated to minimize the number of persons within the area and to protect persons outside the area from exposure to airborne asbestos. Where critical barriers or negative pressure enclosures are used, they shall demarcate the regulated area. Access to regulated areas shall be limited to authorized persons. The Contractor shall control access to regulated areas, ensure that only authorized personnel enter, and verify that Contractor required medical surveillance, training and respiratory protection program requirements are met prior to allowing entrance.

1.18 WARNING SIGNS AND TAPE

Warning signs and tape printed in English shall be provided at the regulated boundaries and entrances to regulated areas. The Contractor shall ensure that all personnel working in areas contiguous to regulated areas comprehend the warning signs. Signs shall be located to allow personnel to read the signs and take the necessary protective steps required before entering the area. Warning signs, as shown and described in DETAIL SHEET 11, shall be in vertical format conforming to 29 CFR 1910 and 29 CFR 1926, Section .1101, a minimum of 20 by 14 inches, and displaying the following legend in the lower panel:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

Spacing between lines shall be at least equal to the height of the upper of any two lines. Warning tape shall be provided as shown and described on DETAIL SHEET 11. Decontamination unit signage shall be as shown and described on DETAIL SHEET 15.

1.19 WARNING LABELS

Warning labels shall be affixed to all asbestos disposal containers used to contain asbestos materials, scrap, waste debris, and other products contaminated with asbestos. Containers with preprinted warning labels conforming to requirements are acceptable. Warning labels shall be as described in DETAIL SHEET 14, shall conform to 29 CFR 1926, Section .1101 and shall be of sufficient size to be clearly legible displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

1.20 TOOLS

Vacuums shall be leak proof to the filter, equipped with HEPA filters, of sufficient capacity and necessary capture velocity at the nozzle or nozzle attachment to efficiently collect, transport and retain the ACM waste material. Power tools shall not be used to remove ACM unless the tool is equipped with effective, integral HEPA filtered exhaust ventilation capture and collection system, or has otherwise been approved for use by the Contracting Officer. Residual asbestos shall be removed from reusable tools prior to storage and reuse. Reusable tools shall be thoroughly decontaminated prior to being removed from regulated areas.

1.21 RENTAL EQUIPMENT

If rental equipment is to be used, written notification shall be provided to the rental agency, concerning the intended use of the equipment, the possibility of asbestos contamination of the equipment and the steps that will be taken to decontaminate such equipment. A written acceptance of the terms of the Contractor's notification shall be obtained from the rental agency.

1.22 AIR MONITORING EQUIPMENT

The Contractor's Designated IH shall approve air monitoring equipment to be used to collect samples. The equipment shall include, but shall not be limited to:

a. High-volume sampling pumps that can be calibrated and operated at a constant airflow up to 16 liters per minute when equipped with a sampling train of tubing and filter cassette.

b. Low-volume, battery powered, body-attachable, portable personal pumps that can be calibrated to a constant airflow up to

approximately 3.5 liters per minute when equipped with a sampling train of tubing and filter cassette, and a self-contained rechargeable power pack capable of sustaining the calibrated flow rate for a minimum of 10 hours. The pumps shall also be equipped with an automatic flow control unit which shall maintain a constant flow, even as filter resistance increases due to accumulation of fiber and debris on the filter surface.

c. Single use standard 25 mm diameter cassette, open face, 0.8 micron pore size, mixed cellulose ester membrane filters and cassettes with 50 mm electrically conductive extension cowl, and shrink bands, to be used with low flow pumps in accordance with 29 CFR 1926, Section .1101 for personal air sampling.

d. Single use standard 25 mm diameter cassette, open face, 0.45 micron pore size, mixed cellulose ester membrane filters and cassettes with 50 mm electrically conductive cowl, and shrink bands, to be used with high flow pumps when conducting environmental area sampling using NIOSH Pub No. 84-100 Methods 7400.

e. Appropriate plastic tubing to connect the air sampling pump to the selected filter cassette.

f. A flow calibrator capable of calibration to within plus or minus 2 percent of reading over a temperature range of minus 4 to plus 140 degrees F and traceable to a NIST primary standard.

1.23 EXPENDABLE SUPPLIES

1.23.1 Duct Tape

Industrial grade duct tape of appropriate widths suitable for bonding sheet plastic and disposal container shall be provided.

1.23.2 Disposal Containers

Leak-tight (defined as solids, liquids, or dust that cannot escape or spill out) disposal containers shall be provided for ACM wastes as required by 29 CFR 1926 Section .1101 and DETAIL SHEETS 9A, 9C.

1.23.3 Disposal Bags

Leak-tight bags, 6 mil thick, shall be provided for placement of asbestos generated waste as described in DETAIL SHEET 9A.

1.23.4 Sheet Plastic

Sheet plastic shall be polyethylene of 6 mil minimum thickness and shall be provided in the largest sheet size necessary to minimize seams ,as indicated on the project drawings. Film shall be clear and conform to ASTM D 4397, except as specified below:

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Asbestos abatement work tasks shall be performed as shown on the detailed plans and drawings, as summarized in paragraph DESCRIPTION OF WORK and including Table 1 and the Contractor's Accident Prevention Plan, Asbestos Hazard Abatement Plan, and the Activity Hazard Analyses. The Contractor shall use the engineering controls and work practices required in 29 CFR 1926, Section .1101(g) in all operations regardless of the levels of exposure. Personnel shall wear and utilize protective clothing and equipment as specified. The Contractor shall not permit eating, smoking, drinking, chewing or applying cosmetics in the regulated area. Personnel of other trades, not engaged in asbestos abatement activities, shall not be exposed at any time to airborne concentrations of asbestos unless all the administrative and personal protective provisions of the Contractor's Accident Prevention Plan are complied with. The Contractor shall stop abatement work in the regulated area immediately when the airborne total fiber concentration: (1) equals or exceeds 0.01 f/cc, or the pre-abatement concentration, whichever is greater, outside the regulated area; or (2) equals or exceeds 1.0 f/cc inside the regulated area. The Contractor shall correct the condition to the satisfaction of the Contracting Officer, including visual inspection and air sampling. Work shall resume only upon notification by the Contracting Officer. Corrective actions shall be documented.

3.2 METHODS OF COMPLIANCE

3.2.1 Mandated Practices

The Contractor shall employ proper handling procedures in accordance with 29 CFR 1926 and 40 CFR 61, Subpart M, and the specified requirements. The specific abatement techniques and items identified shall be detailed in the Contractor's Asbestos Hazard Abatement Plan including, but not limited to, details of construction materials, equipment, and handling procedures. The Contractor shall use the following engineering controls and work practices in all operations, regardless of the levels of exposure:

a. Wet methods or wetting agents to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup; except where it can be demonstrated that the use of wet methods is unfeasible due to, for example, the creation of electrical hazards, equipment malfunction, and in roofing.

b. Prompt clean-up and disposalin leak-tight containers of wastes and debris contaminated with asbestos.

c. Cleaning of equipment and surfaces of containers filled with ACM prior to removing them from work or area.

3.2.2 Control Methods

The Contractor shall use the following control methods to comply with the

PELs:

a. Use of other work practices and engineering controls;

b Where the feasible engineering and work practice controls described above are not sufficient to reduce employee exposure to or below the PELs, the Contractor shall use them to reduce employee exposure to the lowest levels attainable by these controls and shall supplement them by the use of respiratory protection that complies with paragraph, RESPIRATORY PROTECTION PROGRAM.

3.2.3 Vinyl and Asphalt Flooring Materials

When removing vinyl and asphalt floor tiles at the dumpsite, the Contractor shall take all precautions not to break floor tiles. The tiles should be net due to the oceans proximity to the site. Tiles should be placed in 6 mil bags, double bagged and secured prior to shipping to disposal site.

3.2.3.1 Cementitious Siding and Shingles or Transite Panels

If transite panels or corrugated siding is unearthed, the Contractor shall try to remove material in tack as possible. The panels may be burrito wrapped in 6 mil plastic and secured prior to shipping.

3.3 EXPOSURE ASSESSMENT AND AIR MONITORING

3.3.1 General Requirements For Exposure

Exposure assessment, air monitoring and analysis of airborne concentration of asbestos fibers shall be performed in accordance with 29 CFR 1926, Section .1101, the Contractor's air monitoring plan, and as specified. Personal exposure air monitoring (collected at the breathing zone) that is representative of the exposure of each employee who is assigned to work within a regulated area shall be performed by the Contractor's Designated IH. Breathing zone samples shall be taken for at least 25 percent of the workers in each shift, or a minimum of 2, whichever is greater. Air monitoring results at the 95 percent confidence level shall be calculated as shown in Table 2 at the end of this section. The Contractor shall provide an onsite independent testing laboratory with qualified analysts and appropriate equipment to conduct sample analyses of air samples using the methods prescribed in 29 CFR 1926, Section .1101, to include NIOSH Pub No. 84-100 Method 7400. Should either an environmental concentration of 1.0 f/cc expressed as an 8-hour TWA or a personal excursion concentration of 1.0 f/cc expressed as a 30-minute sample occur inside a regulated work area, the Contractor shall stop work immediately, notify the Contracting Officer, and implement additional engineering controls and work practice controls to reduce airborne fiber levels below prescribed limits in the work area. Work shall not restart until authorized by the Contracting Officer.

3.3.2 Environmental Air Monitoring During Abatement

Until an exposure assessment is provided to the Contracting Officer, environmental air monitoring shall be conducted at locations and

frequencies that will accurately characterize any evolving airborne asbestos fiber concentrations. The assessment shall demonstrate that the product or material containing asbestos minerals, or the abatement involving such product or material, cannot release airborne asbestos fibers in concentrations exceeding 0.01 f/cc as a TWA under those work conditions having the greatest potential for releasing asbestos. The monitoring shall be at least once per shift at locations including, but not limited to, close to the work inside a regulated area; representative locations outside of the perimeter of a regulated area. If the sampling outside regulated area shows airborne fiber levels have exceeded background or 0.01 f/cc, whichever is greater, work shall be stopped immediately, and the Contracting Officer notified. The condition causing the increase shall be corrected. Work shall not restart until authorized by the Contracting Officer.

3.3.3 Air-Monitoring Results and Documentation

Air sample fiber counting shall be completed and results provided within 24 hours (breathing zone samples), and 24 hours (environmental/monitoring) after completion of a sampling period. The Contracting Officer shall be notified immediately of any airborne levels of asbestos fibers in excess of established requirements. Written sampling results shall be provided within 5 working days of the date of collection. The written results shall be signed by testing laboratory analyst, testing laboratory principal and the Contractor's Designated IH. The air sampling results shall be documented on a Contractor's daily air monitoring log. The daily air monitoring log shall contain the following information for each sample:

a. Sampling and analytical method used;

b. Date sample collected;

c. Sample number;

d. Sample type: BZ = Breathing Zone (Personal), P = Preabatement, E = Environmental, C = Abatement Clearance;

e. Location/activity/name where sample collected;

f. Sampling pump manufacturer, model and serial number, beginning flow rate, end flow rate, average flow rate (L/min);

g. Calibration date, time, method, location, name of calibrator, signature;

h. Sample period (start time, stop time, elapsed time (minutes);

i. Total air volume sampled (liters);

j. Sample results (f/cc and S/mm square) if EPA methods are required for final clearance;

k. Laboratory name, location, analytical method, analyst, confidence level. In addition, the printed name and a signature and date

block for the Industrial Hygienist who conducted the sampling and for the Industrial Hygienist who reviewed the daily air monitoring log verifying the accuracy of the information.

3.4 CLEANUP AND DISPOSAL

3.4.1 Title to ACM Materials

ACM material resulting from abatement work, except as specified otherwise, shall become the property of the Contractor and shall be disposed of as specified and in accordance with applicable federal, state and local regulations.

3.4.2 Collection and Disposal of Asbestos

All ACM waste shall be collected and including contaminated wastewater filters, scrap, debris, bags, containers, equipment, and asbestos contaminated clothing, shall be collected and placed in leak-tight containers such as double plastic bags (see DETAIL SHEET 9A); sealed double wrapped polyethylene sheet (see DETAIL 9B); or other approved containers. Waste within the containers shall be wetted in case the container is breeched. Asbestos-containing waste shall be disposed of at an EPA, state and local approved asbestos landfill. For temporary storage, sealed impermeable containers shall be stored in an asbestos waste load-out unit or in a storage/transportation conveyance (i.e., dumpster, roll-off waste boxes, etc.) in a manner acceptable to and in an area assigned by the Contracting Officer. Procedure for hauling and disposal shall comply with 40 CFR 61, Subpart M, state, regional, and local standards.

3.4.3 Scale Weight Measurement

Scales used for measurement shall be public scales. Weighing shall be at a point nearest the work at which a public scale is available. Scales shall be standard truck scales of the beam type; scales shall be equipped with the type registering beam and an "over and under" indicator; and shall be capable of accommodating the entire vehicle. Scales shall be tested, approved and sealed by an inspector of the State of HI. Scales shall be calibrated and resealed as often as necessary and at least once every three months to ensure continuous accuracy. Vehicles used for hauling ACM shall be weighed empty daily at such time as directed and each vehicle shall bear a plainly legible identification mark.

3.4.4 Weigh Bill and Delivery Tickets

Copies of weigh bills and delivery tickets shall be submitted to the Contracting Officer during the progress of the work. The Contractor shall furnish the Contracting Officer scale tickets for each load of ACM weighed and certified. These tickets shall include tare weight; identification mark for each vehicle weighed; and date, time and location of loading and unloading. Tickets shall be furnished at the point and time individual trucks arrive at the worksite. A master log of all vehicle loading shall be furnished for each day of loading operations. Before the final statement is allowed, the Contractor shall file with the Contracting Officer certified weigh bills and/or certified tickets and manifests of all

ACM actually disposed by the Contractor for this contract.

3.4.5 Asbestos Waste Shipment Record

The Contractor shall complete and provide the Contracting Officer final completed copies of the Waste Shipment Record for all shipments of waste material as specified in 40 CFR 61, Subpart M and other required state waste manifest shipment records, within 3 days of delivery to the landfill. Each Waste Shipment Record shall be signed and dated by the Contractor, the waste transporter and disposal facility operator.

TABLE 1

INDIVIDUAL WORK TASK DATA ELEMENTS

Sheet__1__ of __1__

There is a separate data sheet for each individual work task.

1. WORK TASK DESIGNATION NUMBER : 01_____
2. LOCATION OF WORK TASK: Tern Island landfill_____
_____
3. BRIEF DESCRIPTION OF MATERIAL TO BE ABATED: Possible asbestos floor tiles and transite material_____
_____

a. Type of Asbestos _____
b. Percent asbestos content _____%

4. ABATEMENT TECHNIQUE TO BE USED_____
5. OSHA ASBESTOS CLASS DESIGNATION FOR WORK TASK_____
6. EPA NESHAP FRIABILITY DESIGNATION FOR WORK TASK
Friable _____ Non-friable Category I _____
Non-friable Category II_____
7. FORM _____ and CONDITION OF ACM: GOOD_____ FAIR_____ POOR_____
8. QUANTITY: METERS_____, SQUARE METERS_____
8a. QUANTITY: LINEAR FT._____, SQUARE FT._____
9. RESPONSE ACTION DETAIL SHEET NUMBER FOR WORK TASK_____
10. SET-UP DETAIL SHEET NUMBERS
FOR WORK TASK _____, _____, _____, _____,
_____, _____, _____, _____.

NOTES:

(1) Numeric sequence of individual work tasks (1,2,3,4, etc.) for each regulated area. Each category of EPA friability/OSHA class has a separate task.
(2) Specific location of work (building, floor, area, e.g., Building 1421, 2nd Floor, Rm 201)
(3) A description of material to be abated (example: horizontal pipe, cement wall panels, tile, stucco, etc.) type of asbestos (chrysotile, amosite, crocidolite, etc.); and % asbestos content.
(4) Technique to be used: Removal = REM; Encapsulation = ENCAP; Encasement = ENCAS; Enclosure = ENCL; Repair = REP.
(5) Class designation: Class I, II, III, or IV (OSHA designation).
(6) Friability of materials: Check the applicable EPA NESHAP friability designation.
(7) Form: Interior or Exterior Architectural = IA or EA; Mechanical/Electrical = ME.
Condition: Good = G; Fair = F; Poor = P.
(8) Quantity of ACM for each work task in meters or square meters.
(8a) Quantity of ACM for each work task in linear feet or square feet.
(9) Response Action Detail Sheet specifies the material to be abated and the methods to be used. There is only one Response Action Detail Sheet for each abatement task.

TABLE 1

INDIVIDUAL WORK TASK DATA ELEMENTS

(10) Set-up Detail Sheets indicate containment and control methods used in support of the response action (referenced in the selected Response Action Detail Sheet).

TABLE 2

FORMULA FOR CALCULATION OF THE 95 PERCENT CONFIDENCE LEVEL
(Reference: NIOSH 7400)

Fibers/cc(01.95 percent CL) = X + [(X) * (1.645) * (CV)]

Where: X = ((E)(AC))/((V)(1000))

E = ((F/Nf) - (B/Nb))/Af

CV = The precision value; 0.45 shall be used unless the analytical laboratory provides the Contracting Officer with documentation (Round Robin Program participation and results) that the laboratory's precision is better.

AC = Effective collection area of the filter in square millimeters

V = Air volume sampled in liters

E = Fiber density on the filter in fibers per square millimeter

F/Nf = Total fiber count per graticule field

B/Nb = Mean field blank count per graticule field

Af = Graticule field area in square millimeters

TWA = C1/T1 + C2/T2 = Cn/Tn

Where: C = Concentration of contaminant

T = Time sampled.

TABLE 3

NI0SH METHOD 7400

PCM ENVIRONMENTAL AIR SAMPLING PROTOCOL (NON-PERSONAL)

Sample Location	Minimum No. of Samples	Filter Pore Size (Note 1)	Min. Vol. (Note 2) (Liters)	Sampling Rate (liters/min.)
Inside Abatement Area	0.5/140 Square Meters (Notes 3 & 4)	0.45 microns	3850	2-16
Each Room in 1 Abatement Area Less than 140 Square meters		0.45 microns	3850	2-16
Field Blank	2	0.45 microns	0	0
Laboratory Blank	1	0.45 microns	0	0

Notes:

1. Type of filter is Mixed Cellulose Ester.

2. Ensure detection limit for PCM analysis is established at 0.005 fibers/cc.

3. One sample shall be added for each additional 140 square meters. (The corresponding I-P units are 5/1500 square feet).

4. A minimum of 5 samples are to be taken per abatement area, plus 2 field blanks.

TABLE 4

EPA AHERA METHOD: TEM AIR SAMPLING PROTOCOL

Location Sampled	Minimum No. of Samples	Filter Pore Size	Min. Vol. (Liters)	Sampling Rate (liters/min.)
Inside Abatement Area	5	0.45 microns	1500	2-16
Outside Abatement Area	5	0.45 microns	1500	2-16
Field Blank	2	0.45 microns	0	0
Laboratory Blank	1	0.45 microns	0	0

Notes:

1. Type of filter is Mixed Cellulose Ester.

2. The detection limit for TEM analysis is 70 structures/square mm.

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

PROJECT NAME _____ CONTRACT NO. _____
PROJECT ADDRESS _____
CONTRACTOR FIRM NAME _____
EMPLOYEE'S NAME _____,_____,_____,
(Print) (Last) (First) (MI)

Social Security Number: _____-_____-_____,

WORKING WITH ASBESTOS CAN BE DANGEROUS. INHALING ASBESTOS FIBERS HAS BEEN LINKED WITH TYPES OF LUNG DISEASE AND CANCER. IF YOU SMOKE AND INHALE ASBESTOS FIBERS, THE CHANCE THAT YOU WILL DEVELOP LUNG CANCER IS GREATER THAN THAT OF THE NONSMOKING PUBLIC.

Your employer's contract for the above project requires that you be provided and you complete formal asbestos training specific to the type of work you will perform and project specific training; that you be supplied with proper personal protective equipment including a respirator, that you be trained in its use; and that you receive a medical examination to evaluate your physical capacity to perform your assigned work tasks, under the environmental conditions expected, while wearing the required personal protective equipment. These things are to be done at no cost to you. By signing this certification, you are acknowledging that your employer has met these obligations to you. The Contractor's Designated Industrial Hygienist will check the block(s) for the type of formal training you have completed. Review the checked blocks prior to signing this certification.

FORMAL TRAINING:
_____ a. For Competent Persons and Supervisors: I have completed EPA's Model Accreditation Program (MAP) training course, "Contractor/Supervisor", that meets this State's requirements.

b. For Workers:
_____ (1) For OSHA Class I work: I have completed EPA's MAP training course, "Worker", that meets this State's requirements.
_____ (2) For OSHA Class II work (where there will be abatement of more than one type of Class II materials, i.e., roofing, siding, floor tile, etc.): I have completed EPA's MAP training course, "Worker", that meets this State's requirements.
(3) For OSHA Class II work (there will only be abatement of one type of Class II material):
_____ (a) I have completed an 8-hour training class on the elements of 29 CFR 1926, Section .1101(k)(9)(viii), in addition to the specific work practices and engineering controls of 29 CFR 1926, Section .1101(g) and hands-on training.
_____ (b) I have completed EPA's MAP training course, "Worker", that meets this State's requirements.
_____ (4) For OSHA Class III work: I have completed at least a 16-hour course consistent with EPA requirements for training of local education agency maintenance and custodial staff at 40 CFR 763, Section .92(a)(2) and

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

the elements of 29 CFR 1926, Section .1101(k)(9)(viii), in addition to the specific work practices and engineering controls at 29 CFR 1926, Section .1101, and hands-on training.

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

_____ (5) For OSHA Class IV work: I have completed at least a 2-hr course consistent with EPA requirements for training of local education agency maintenance and custodial staff at 40 CFR 763, (a)(1), and the elements of 29 CFR 1926, Section .1101(k)(9)(viii), in addition to the specific work practices and engineering controls at 29 CFR 1926, Section .1101(g) and hands-on training.

_____ c. Workers, Supervisors and the Designated Competent Person: I have completed annual refresher training as required by EPA's MAP that meets this State's requirements.

PROJECT SPECIFIC TRAINING:
_____ I have been provided and have completed the project specific training required by this Contract. My employer's Designated Industrial Hygienist and Designated Competent Person conducted the training.

RESPIRATORY PROTECTION:
_____ I have been trained in accordance with the criteria in the Contractor's Respiratory Protection program. I have been trained in the dangers of handling and breathing asbestos dust and in the proper work procedures and use and limitations of the respirator(s) I will wear. I have been trained in and will abide by the facial hair and contact lens use policy of my employer.

RESPIRATOR FIT-TEST TRAINING:
_____ I have been trained in the proper selection, fit, use, care, cleaning,maintenance, and storage of the respirator(s) that I will wear. I have been fit-tested in accordance with the criteria in the Contractor's Respiratory Program and have received a satisfactory fit. I have been assigned my individual respirator. I have been taught how to properly perform positive and negative pressure fit-check upon donning negative pressure respirators each time.

MEDICAL EXAMINATION:
_____ I have had a medical examination within the last twelve months which was paid for by my employer. The examination included: health history, pulmonary function tests, and may have included an evaluation of a chest x-ray. A physician made a determination regarding my physical capacity to perform work tasks on the project while wearing personal protective equipment including a respirator. I was personally provided a copy and informed of the results of that examination. My employer's Industrial Hygienist evaluated the medical certification provided by the physician and checked the appropriate blank below. The physician determined that there:

_____ were no limitations to performing the required work tasks.
_____ were identified physical limitations to performing the required work tasks.

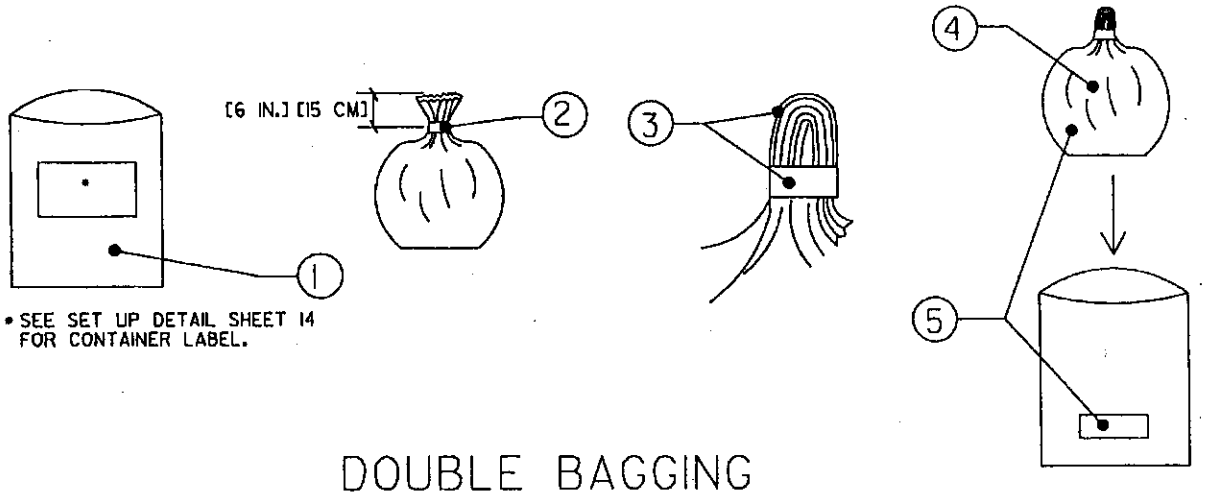
Date of the medical examination _____

Employee Signature _____ date _____

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

Contractor's Industrial
Hygienist Signature _____ date _____

-- End of Section --



DOUBLE BAGGING

Containers—double bagging

1. Place the still-wet asbestos-containing and asbestos-contaminated material into a prelabled 6-mil polyethylene bag. Do not overfill. Do not use bag for asbestos-containing or asbestos-contaminated material that could puncture the bag. (See sheet 9C for packaging items that could puncture bags.)

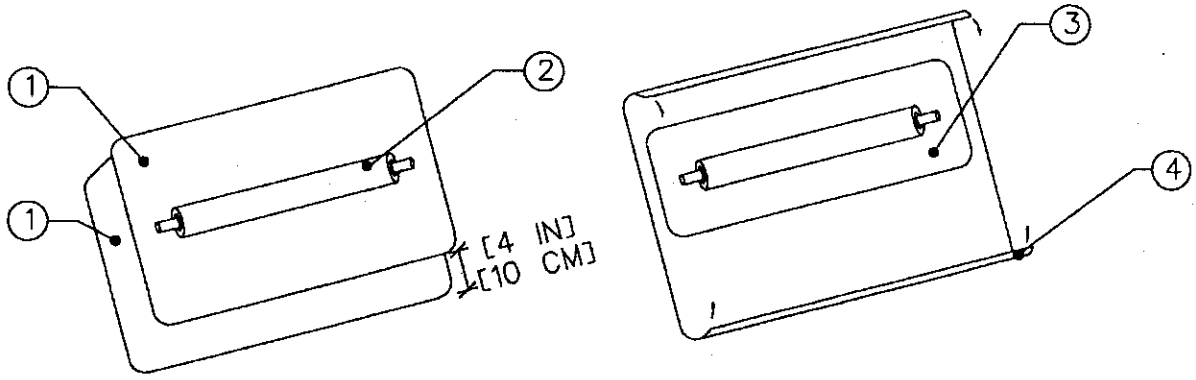
2. Evacuate with HEPA vacuum, and seal collapsed bag by twisting top [6 in] [15 cm] closed and wrapping with a minimum of two layers of duct tape.

3. Twist top and fold over. Apply second wrap of duct tape.

4. Adequately wet clean outside of disposal bag by wet wiping, and take bag to the equipment and staging area.

5. Place bag inside a second prelabled 6-mil polyethylene bag.

6. Seal outer bag by repeating steps 2 and 3 above. Take bag to load-out unit; see sheet 20.



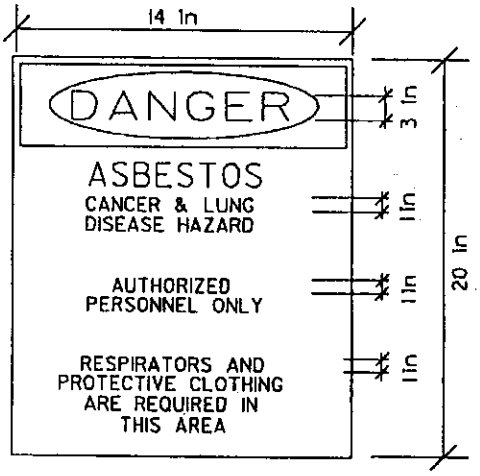
Containers—leak-tight wrapping

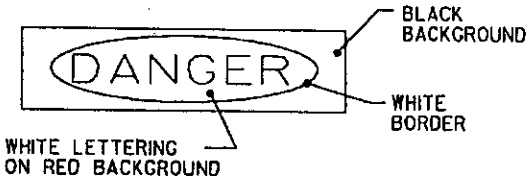
1. Place two layers of 6-mil polyethylene sheet on surface so that the bottom layer is offset [4 in] [10 cm] from the top layer.

2. Place the still-wet asbestos-containing or asbestos-contaminated material that is too large (boiler, vessel, pipe segment, etc.) to be placed in disposal bags on the top layer of polyethylene.

3. Wrap the top layer tightly around the contaminated material. Seal all edges of the top layer of sheeting with duct tape. Apply labels; see sheet 14.

4. Repeat procedure with bottom layer, including labeling. Take to load-out unit; see sheet 20.





AREA WARNING SIGNS AND WARNING TAPE

DETAIL (01)

Area warning signs and warning tape

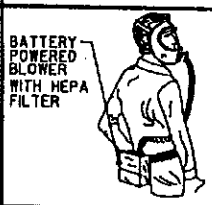
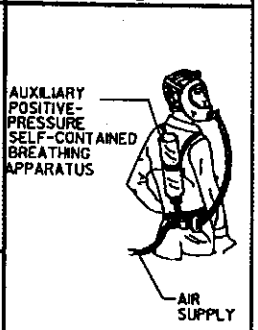
1. Provide and install [4 mil] [0.10 mm] polyethylene warning tape at locations shown on the abatement area plan.

2. Warning tape is to be attached to wood or metal posts at [10 ft] [300 cm] on center. Tape must be [3 ft] [100 cm] from ground.

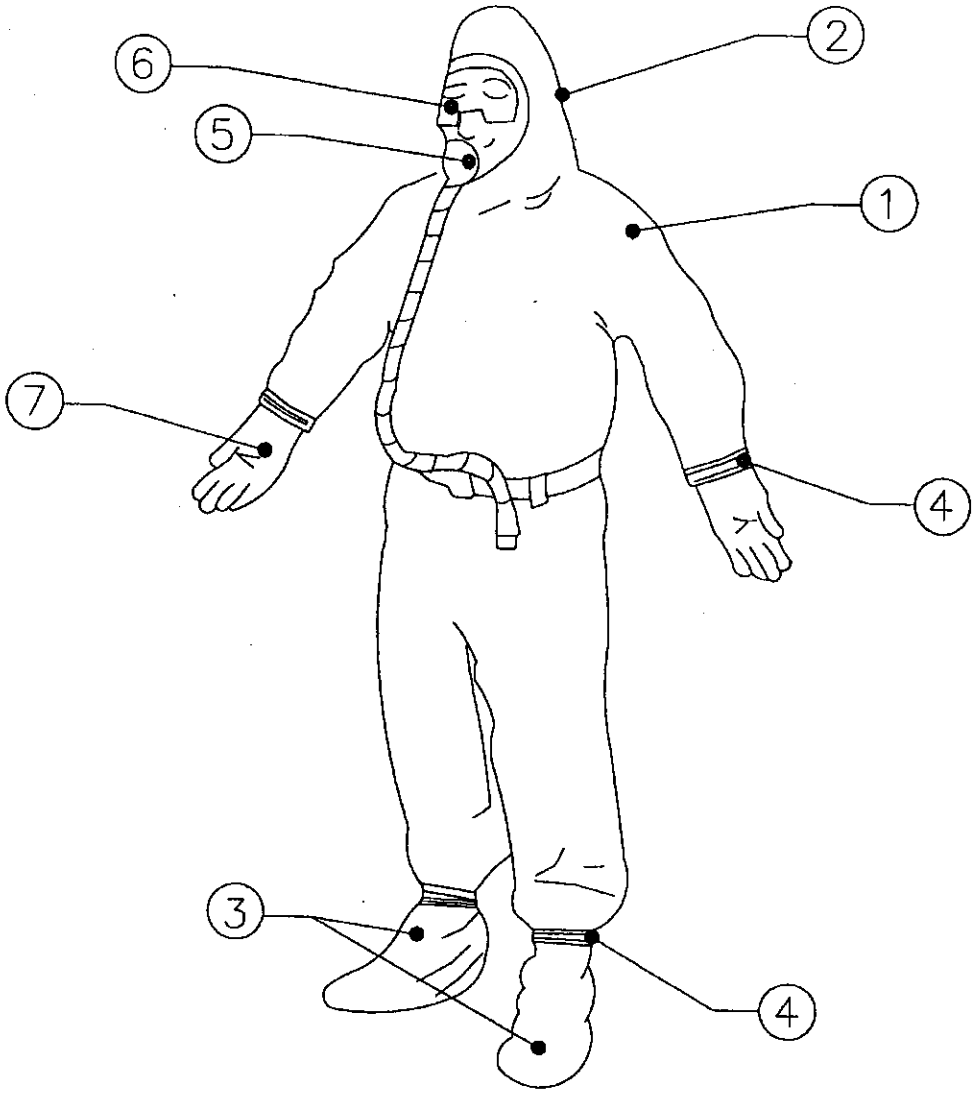
3. Attach both warning signs at each entrance of the work area and at [33 yd] [30 m] on center where security fencing is installed.

4. Warning signs must be in English and other languages required by the contract.

5. Install at eye level.

FIBER CONCENTRATION	MINIMUM REQUIRED RESPIRATOR	
NOT IN EXCESS OF 1 FIBER/CC	HALF-MASK AIR PURIFYING RESPIRATOR WITH HEPA FILTERS	
NOT IN EXCESS OF 5 FIBERS/CC	FULL FACEPIECE AIR-PURIFYING RESPIRATOR WITH HEPA FILTERS	
NOT IN EXCESS OF 10 FIBERS/CC	LOOSE FITTING HELMET OR HOOD, POWERED AIR-PURIFYING RESPIRATOR WITH HEPA FILTERS	
NOT IN EXCESS OF 10 FIBERS/CC	POWERED AIR-PURIFYING RESPIRATOR WITH FULL FACEPIECE AND HEPA FILTER	
NOT IN EXCESS OF 10 FIBERS/CC	LOOSE FITTING HELMET OR HOOD, SUPPLIED AIR RESPIRATOR OPERATED IN CONTINUOUS FLOW MODE WITH BACK-UP HEPA FILTER	
NOT IN EXCESS OF 10 FIBERS/CC	SUPPLIED AIR RESPIRATOR WITH FULL FACEPIECE OPERATED IN CONTINUOUS FLOW MODE WITH BACK-UP HEPA FILTER	
NOT IN EXCESS OF 100 FIBERS/CC	FULL FACEPIECE SUPPLIED AIR RESPIRATOR OPERATED IN PRESSURE-DEMAND MODE WITH BACK-UP HEPA FILTER	
GREATER THAN 100 FIBERS/CC OR UNKNOWN CONCENTRATION	FULL FACEPIECE SUPPLIED-AIR RESPIRATOR OPERATED IN PRESSURE-DEMAND MODE WITH AUXILIARY POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS	

Respiratory protection table



Protective clothing

1. Disposable or reusable full body suit with elastic around hood and shoe cover openings is required or as otherwise specified in the contract.

2. Hood shall be worn over respirator's head and neck straps.

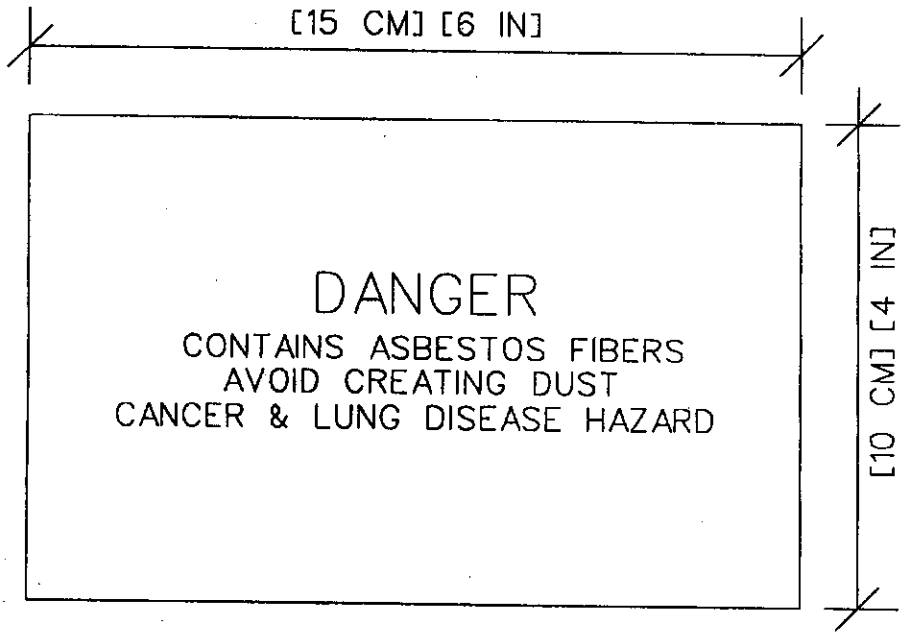
3. Shoe covers shall be worn over work shoes.

4. Cuffs shall be taped with duct tape at wrists and ankles in order to prevent infiltration.

5. Cartridge-type air-purifying HEPA filter respirator is minimal requirement. Type shall be selected in accordance with sheet 12.

6. If eye protection is not integral with respirator, protection goggles are required.

7. Rubber work gloves are recommended to be worn alone or under outer work gloves provided for hand and operation safety.



Disposal container label

Attach warning labels to each disposal container removed from abatement area.

Certification of Final Cleaning And Visual Inspection

Individual abatement task as identified in paragraph, Description of Work _____

In accordance with the cleaning and decontamination procedures specified in the Contractor's asbestos hazard abatement plan and this contract, the Contractor hereby certifies that he/she has thoroughly visually inspected the decontaminated regulated work area (all surfaces, including pipes, beams, ledges, walls, ceiling, floor, decontamination unit, etc.) in accordance with ASTM E1368, *Standard Practice for Visual Inspection of Asbestos Abatement Projects*, and has found no dust, debris, or asbestos-containing material residue.

BY: (Contractor's signature) _____ Date _____

Print name and title _____

(Contractor's Onsite Supervisor signature) _____ Date _____

Print name and title _____

(Contractor's Industrial Hygienist signature) _____ Date _____

Print name and title _____

Contracting Officer Acceptance or Rejection

The Contracting Officer hereby determines that the Contractor has performed final cleaning and visual inspection of the decontaminated regulated work area (all surfaces including pipes, beams, ledges, walls, ceiling, floor, decontamination unit, etc.) and by quality assurance inspection, finds the Contractor's final cleaning to be:

☐ Acceptable

☐ Unacceptable, Contractor instructed to reclean the regulated work area.

BY: Contracting Officer's Representative

Signature _____ Date _____

Print name and title _____

SECTION TABLE OF CONTENTS

DIVISION 13 - SPECIAL CONSTRUCTION

13286N

HANDLING OF MERCURY LAMPS/SWITCHES

-- End of Section Table of Contents --

13286N

HANDLING OF MERCURY LAMPS/SWITCHES

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.1000	Air Contaminants
40 CFR 260	Hazardous Waste Management System: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Generators of Hazardous Waste
40 CFR 263	Transporters of Hazardous Waste
40 CFR 264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities
40 CFR 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal FacilitiesRef Title
40 CFR 268	Land Disposal Restrictions
40 CFR 270	EPA Administered Permit Programs: The Hazardous Waste Program
40 CFR 273	Standards For Universal Waste Management
40 CFR 761	Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use ProhibitionsRef Title

1.2 REQUIREMENTS

Removal and disposal of mercury-containing lamps/switches.

1.3 DEFINITIONS

1.3.1 Certified Industrial Hygienist (CIH)

A industrial hygienist hired by the contractor shall be certified by the American Board of Industrial Hygiene.

1.3.2 Lamps

Lamp, also referred to as "universal waste lamp", is defined as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.

1.3.3 Spill

Spill means both intentional and unintentional spills, leaks, and other uncontrolled discharges when the release results in any quantity of mercury running off or about to run off the external surface of the equipment or other mercury, as well as the contamination resulting from those releases.

1.3.4 Universal Waste

Universal Waste means any of the following hazardous wastes that are managed under the universal waste requirements 40 CFR 273:

(1) Batteries as described in Sec. 273.2 of this chapter;
(2) Pesticides as described in Sec. 273.3 of this chapter;
(3) Thermostats as described in Sec. 273.4 of this chapter; and
(4) Lamps as described in Sec. 273.5 of this chapter.

1.4 QUALITY ASSURANCE

1.4.1 Regulatory Requirements

Perform mercury-containing lamps storage and transport in accordance with 40 CFR 261, 40 CFR 264, 40 CFR 265, 40 CFR 273.

1.4.2 Training

Certified industrial hygienist (CIH) shall instruct and certify the training of all persons involved in the removal of mercury-containing lamps/switches. The instruction shall include: The dangers of PCB and mercury exposure, decontamination, safe work practices, and applicable OSHA and EPA regulations. The CIH shall review and approve the PCB and Mercury-Containing Lamp Removal Work Plans.

1.4.3 Regulation Documents

Maintain at all times one copy each at the office and one copy each in view at the job site of 29 CFR 1910.1000, 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 265, 40 CFR 268, 40 CFR 270, 40 CFR 273 and of the Contractor removal work plan and disposal plan for PCB and for associated mercury-containing lamps.

1.5 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-13 Certificates

Qualifications of CIH; GA

Training Certification; GA

Mecrury and Lamp Removal Work Plan; GA

Mercury and Lamp Disposal Plan; GA

SD-18 Records

Transporter certification of notification to EPA of their mercury waste activities and EPA ID numbers; GA

Certification of Decontamination

Certificate of Disposal and/or recycling; FIO.

Submit to the Government before application for payment within 30 days of the date that the disposal of the PCB and mercury-containing lamp waste identified on the manifest was completed.

DD Form 1348-1; FIO

1.6 ENVIRONMENTAL REQUIREMENTS

Use special clothing:

a. Disposable gloves (polyethylene)

b. Eye protection

c. PPE as required by CIH

1.7 SCHEDULING

Notify the Contracting Officer 20 days prior to the start of mercury-containing lamp/swtich removal work.

1.8 QUALITY ASSURANCE

1.8.1 Qualifications of CIH

Submit the name, address, and telephone number of the Industrial Hygienist selected to perform the duties in paragraph entitled "Certified Industrial

Hygienist." Submit training certification that the Industrial Hygienist is certified, including certification number and date of certification or re certification.

1.8.2 Mercury Lamp/Switch Removal Work Plan

Submit a job-specific plan within 20 calendar days after award of contract of the work procedures to be used in the removal, packaging, and storage of associated mercury-containing lamps/switches. Include in the plan: Requirements for Personal Protective Equipment (PPE), spill cleanup procedures and equipment, eating, smoking and restroom procedures. The plan shall be approved and signed by the Certified Industrial Hygienist. Obtain approval of the plan by the Contracting Officer prior to the start of mercury lamp/switches removal work.

1.8.3 Mercury Lamp/Switches Disposal Plan

Submit a Mercury Lamp/Switches Disposal Plan with 20 calendar days after award of contract. The PCB and Lamp Disposal Plan shall comply with applicable requirements of federal, state, and local PCB and Universal waste regulations and address:

a. Estimated quantities of wastes to be generated, disposed of, and recycled.

b. Names and qualifications of each Contractor that will be transporting, storing, treating, and disposing of the wastes. Include the facility location. Furnish two copies of EPA and mercury-containing lamp/switches waste permit applications and EPA identification numbers, as required.

c. Names and qualifications (experience and training) of personnel who will be working on-site with PCB and mercury-containing lamp wastes.

d. Spill prevention, containment, and cleanup contingency measures to be implemented.

e. Work plan and schedule for PCB and mercury-containing lamp waste removal, containment, storage, transportation, disposal and or recycling. Wastes shall be cleaned up and containerize daily.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 WORK PROCEDURE

Furnish labor, materials, services, and equipment necessary for the removal of mercury-containing fluorescent lamps/switches, in accordance with local, state, or federal regulations. Do not brake mercury containing fluorescent lamps/switches or high intensity discharge lamps.

3.1.1 Work Operations

Ensure that work operations or processes involving PCB or PCB-contaminated materials are conducted in accordance with 40 CFR 761, 40 CFR 262 40 CFR 263, and the applicable requirements of this section, including but not limited to:

a. Obtaining suitable mercury-containing lamp/switches storage sites.

b. Notifying Contracting Officer prior to commencing the operation.

c. Reporting leaks and spills to the Contracting Officer.

d. Cleaning up spills.

e. Inspecting Mercury and Mercury-contaminated items and waste containers for leaks and forwarding copies of inspection reports to the Contracting Officer.

f. Maintaining inspection, inventory and spill records.

3.2 REMOVAL

3.2.1 Mercury Lighting Lamps/Switches

Mercury light switches may have been disposed of at the landfill. If they are located, the item shall be placed in double plastic bags each 6 mil thick. It shall be goosed necked and tapes securely.

3.3 STORAGE FOR DISPOSAL

3.3.1 Storage Containers for Lamps/Switches

Store mercury containing lamps/switches in appropriate DOT containers. The boxes shall be stored and labeled for transport in accordance with 40 CFR 273.

3.3.2 Labeling of Waste Containers

Label with the following:

a. Date the item was placed in storage and the name of the cognizant activity/building.

b. Label mercury-containing lamp waste in accordance with 40 CFR 273. Affix labels to all lighting waste containers.

3.4 DISPOSAL

Dispose of off Government property in accordance with EPA, DOT, and local regulations at a permitted site.

3.4.1 Identification Number

Federal regulations 40 CFR 761, and 40 CFR 263 require that generators, transporters, commercial storers, and disposers of PCB waste posses U.S. EPA identification numbers. The contractor shall verify that the activity has a U.S. EPA generator identification number for use on the Uniform Hazardous Waste manifest. If not, the contractor shall advise the activity that it must file and obtain an I.D. number with EPA prior to commencement of removal work. For mercury containing lamp removal, Federal regulations 40 CFR 273 require that large quantity handlers of Universal waste (LQHUW) must provide notification of universal waste management to the appropriate EPA Region (or state director in authorized states), obtain an EPA identification number, and retain for three years records of off-site shipments of universal waste. The contractor shall verify that the activity has a U.S. EPA generator identification number for use on the Universal Waste manifest. If not, the contractor shall advise the activity that it must file and obtain an I.D. number with EPA prior to commencement of removal work.

3.4.2 Transporter Certification

Comply with disposal and transportation requirements outlined in 40 CFR 761 and 40 CFR 263. Before transporting the PCB waste, sign and date the manifest acknowledging acceptance of the PCB waste from the Government. Return a signed copy to the Government before leaving the job site. Ensure that the manifest accompanies the waste at all times. Submit transporter certification of notification to EPA of their PCB waste activities (EPA Form 7710-53).

-- End of Section --